WR-35 Rev (9-11)

State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	8/30/12
API#:	047-005-02241

arm name: Boone East Development Co.	Operator Wel	No.: NREC#4	() 	······
OCATION: Elevation: 1698.19'	Quadrangle:	Wharton 7.5'	enannum van en	velikalaidel velikartas Ave
District: Crook	County: Boon			
Latitude: 3923 Feet South of 37 Deg. 5				3340m - 444-55m/4-
Longitude 9892 Feet West of 81 Deg. 4	12 Min	. <u>30</u> Sec	· .	
Company: New River Energy Corp.		epu		
Address: 125 Hurricane Branch Rd	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Chapmanville, WV 25508	16	30	0	
Agent: Timothy E. Comer	13 3/8	180	Open Hole	
Inspector: Barry Stollings		The state of the s		
Date Permit Issued: 11/09/2007				
Date Well Work Commenced: 7/23/07				
Date Well Work Completed: 7/24/07				
Verbal Plugging: Yes, Per Carlos Hively			1 6 200	
Date Permission granted on: 7/23/07	***************************************			
Rotary Cable Rig	ind and Community you are described in the analysis from the February Helicity		GE'	0 5 2012
Total Vertical Depth (ft): 180'	· · · · · · · · · · · · · · · · · · ·		0=	
Total Measured Depth (ff): 180'	· .		NAN/ 10	Logiman (
Fresh Water Depth (ft.): N/A	- mija mirati mentaja y kalama Kala da	<u> </u>		
Salt Water Depth (ft.): N/A			**************************************	***************************************
Is coal being mined in area (N/Y)? Y				
Coal Depths (ft.): N/A	- Marie - Andrein and Carrier & Andrein and a		***************************************	
Void(s) encountered (N/Y) Depth(s) N				
		<u></u>		
OPEN FLOW DATA (If more than two producing formation		de additional di	ita on separate sh	icet)
Producing formation Pay 20 Gas: Initial open flow MCF/d Oil: Initial open flo	one depth (ft)	əl/d		
Final open flow MCF/d Final open flow				
Time of open flow between initial and final tests		er v.c.		
Static rock Pressure psig (surface pressure) afti		'S		
Second producing formation Pay zon				
Gas: Initial open flow MCF/d Oil: Initial open flo				
Final open flow MCF/d Final open flow		l/d		
Time of open flow between initial and final tests				
Static rock Pressurepsig (surface pressure) after	errioui	Š		
:	nd am familiar	with the inforn	nation submitted	on this document a
certify under penalty of law that I have personally examined as	nu auc ianguac			
certify under penalty of law that I have personally examined at all the attachments and that, based on my inquiry of those indivi-			e for obtaining th	e information I bel
			e for obtaining th	ne information I bel
If the attachments and that, based on my inquiry of those indivi			_	e information I bel

NOTE: IN THE AREA BELOW PUT THE FOLLOFRACTURING OR STIMULATING, PHYSICAL CHANG	wing: 1). Details of perforated intervals se, etc. 2). The well log which is a systematic and bottoms of all formations, including irrace to total depth.
FRACTURING OR STIMULATING, PHYSICAL CHANG DETAILED GEOLOGICAL RECORD OF THE TOPS COAL ENCOUNTERED BY THE WELLBORE FROM SU	SE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC AND BOTTOMS OF ALL FORMATIONS, INCLUDING
FRACTURING OR STIMULATING, PHYSICAL CHANG DETAILED GEOLOGICAL RECORD OF THE TOPS COAL ENCOUNTERED BY THE WELLBORE FROM SU	SE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC AND BOTTOMS OF ALL FORMATIONS, INCLUDING
	JRFACE TO TOTAL DEPTH.
Perforated Intervals, Fracturing, or Stimulating:	
	The state of the s
Plug Back Details Including Plug Type and Depth(s):	
ring back betails including ring rype and exeptings.	
	handalistialide Antick handa and han
Formations Encountered: Top De Surface:	pth / Bottom Depth
·	CHOO OF A CASE
	SEP 6 5 2882
	<u>ter Banain ant Ci</u> Entropiasion ant Ci
	Barel Barel

DATE: 3/1/12

API#: 47-011-00994

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm name: Eustace & Della Blake	Oper	rator Well No.:_	HR 436	
LOCATION: Elevation: 753'	Quad	lrangle:	_Milton WV 7	7.5'
District: Union	Countre	Cahel	1	
Latitude: 11032 Feet South of 38 Deg	County,	in 00 Sec	1	
Longitude 1032 Feet West of 82	Deg. 12	Min. 30	Sec.	•
Company:Hard Rock Exploration				4
	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 1244 Martins Branch Road				
Charleston WV, 25312				
Agent: Marc Scholl	13 3/8"	34	34	N/A
Inspector: Ralph Triplett	9 5/8"	545	545	288 ft3 CTS
Date Permit Issued: 9/29/11	7"	2368	2368	518 ft3 CTS
Date Well Work Commenced: 11/28/11	4.5"	6700	6700	130 CuFt
Date Well Work Completed: 12/14/11				
Verbal Plugging:	Ran Gamma I	og from KOP(2628' - 3568'M	D)
Date Permission granted on:				
Rotary x Cable Rig				
Total Depth (feet): 6762'TMD, 3363'TVD				
Fresh Water Depth (ft.): 200'				
			-	
Salt Water Depth (ft.): 850', 1515'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): N/A				
OPEN FLOW DATA				•
Draducing formation Laws When Cha	la Davierana	14- (B) 226	023.4T3 <i>(7(</i> 0.23	MD.
Producing formation Lower Huron Sha	nePay zone			
C T-:4:-1 C 1 NGCC/16	nit. T. W. T)6'TVD - 336	23, TAD
Gas: Initial open flow odor MCF/d (
Final open flow 1000+ MCF/d	Final open II	ow	_Rp1/q	
Final open flow1000+MCF/d Time of open flow between initial and f Static rock Pressure psig (surface	inal tests	/2Hc	urs	Bears have been much be being black
Static rock Pressurepsig (surface	e pressure) aff	ter72F	lours	Beachad as Art Cashell
			Same a fine to the	e of CII & Cas
Second producing formation	Pay zon		,	
	Initial open fle			PR 0 2 2012
	inal open flow			
Time of open flow between initial and i	inal tests	Hour		eperioses of
Static rock Pressurepsig (surface	e pressure) aft	terHou		
				The state of the s
NOTE: ON BACK OF THIS FORM PUT THE I	OLLOWING:	1). DETAILS (OF PERFORATI	ED
INTERVALS, FRACTURING OR STIMULATIN				
LOG WHICH IS A SYSTEMATIC DETAILED	GEOLOGICAL	KECORD OF	ALL FORMAT	TONS,
INCLUDING COAL ENCOUNTERED BY THE	WELLBORE.			
Signed:	1-			
By: Proxidox				4
Date: 3/30/60x				

Formation:	Тор:	Bottom:
Soil, Sand, and Shale	0	223
Sand	223	298
Sand/Shale	298	1408
Salt Sand	1408	1518
Lime	1518	1658
Injun Sand/Squaw	1658	1838
Shale	1838	2284
Coffee Shale	2284	2294
Berea	2294	2304
Devonian Shale	2304	3363
Lower Huron Section	3160	3363

All formation depths shown As TVD

12/08/11 Run total of 155 jts of R-3 4.5" 11.6ppf casing N-80 casing to depth of 6700' KB. Run total of 16 mechanical set Packers Plus formation packers for a 15 stage completion. RU DSA and 10k flanged valve. MIRU Baker Cmt Crew at 6:45pm. Dropped 5bbl water with 2 balls for toe sub and follow with N2. Pressure up with N2 and set packers, open toe sub at 3718psi. Perform annular squeeze on top packer with 100sx mixed at 15ppg.

	Sleeve Size (FP)	Sleeve Depth	Packers
Stage 1	GS/POFC	6698.27	6519.99
Stage 2	1.250	6427.82	6297.38
Stage 3	1.500	6205.22	6074.73
Stage 4	1.625	5982.58	5852.09
Stage 5	1.750	5759.82	5629.28
Stage 6	1.875	5537.11	5406.77
Stage 7	2.000	5314.68	5184.39
Stage 8	2.125	5092.30	4961.96
Stage 9	2.375	4869.73	4739.14
Stage 10	2.500	4646.83	45616.39
Stage 11	2.750	4424.22	4293.68
Stage 12	2.875	4201.38	4070.84
Stage 13	3.125	3978.70	3848.21
Stage 14	3.250	3755.98	3625.34
Stage 15	3.500	3533.12	3360.88
	:		2681.39

12/12 /11 - 12/14/11 MIRU Baker Stim crew. Start pumping N2 on Stg1. Work rate to 100kscf/min and pump total of 1MMscf N2. Shut down and drop ball for stage 2. Pump ball to sleeve with low rate N2. Open sleeve and increase rate. Pump total of 1MMscf N2. Drop ball for stage 3. Repeat process for stages 3-15.

	Stg 1	Stg 2	Stg 3	Stg 4	Stg 5	Stg 6	Stg 7	Stg 8
Max P	5460	5089	4688	4672	5217	5261	5028	4908
Avg P	3995	4874	4629	4615	5108	5193	5005	4888
Max R	98.8	105.9	104.0	105.9	110.0	105.3	102.8	101.4
Avg R	96.5	103.1	103.7	104.9	105.0	103.6	101.4	100.7
5 min	1100	1126	1229	1274	1597	2497	2660	100.7 2651
ė			:					- Chica of Oll 4 Cas
	Stg 9	Stg 10	Stg 11	Stg 12	Stg 13	Stg 14	Stg 15	and the state of t
Max P	4721	4531	4538	4677	4609	4419	3586	APR 02 2012
Avg P	4624	4512	4510	4632	4471	4298	3571	10 11 2 4 Ent
Max R	106.5	103.2	103.5	106.1	109.8	109.0	104.9	9 7 79 2 707
Avg R	104.5	102.3	103.3	105.1	106.8	106.6	103.8	ja Par bankof
5 min	1683	1585	1460	1642	1540	1390	1160 [[]	a procession at the section of the s

WR-35 Rev (5-01)

Date: August 24,2012 API#: 47-013-04737

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm Name:	Donald F	'oe Gunn		_Operator V	Vell No.:	Gainer #2		
LOCATION:	Elevation	n: 1140 '			Qua	adrangle: Millst	one	
					-	g <u></u>		
	District:	Sherman	:		_	County: Calh	oun	
	Latitude:		Feet South of		Deg.	50 Min.	0	Sec.
	Longitude:	6600	Feet West of	81	Deg.	5 Min.	0	Sec.
<u> </u>	Б	10						
Company:	Rogers a	ind Son]	مدا المحمدا الم	1	[
				Casing &	Used in		Cement fill	
Address:	12/25 €	. Calhoun Hw		Tubing	Drilling	Left in well	up Cu. Ft.	
Address:		burg, WV 252		9 5/8"	410'	410'	150 sacks	-
Agent:	Michael		-3-	3 3/0	410	410	to surface	
nspector:	Ed Gain						to surface	-
Date Permit		7/5/2011		7"	2405'	2405'	200 sacks	-
Date Well W			8/22/2011		2.100		Loo Jacks	\dashv
Date Well W			9/30/2011	 			- 	-
Verbal Plug				4 1/2"		5272'	145 sacks	4
Date Permis		nted on:						1
Rotary X		Cable	Rig					
Total Dep		5300						7
Fresh Wa	ter Depth	(ft.):	N/A			Part Day Prof Fair of E	rigan i galag	7
					يمذادر	E William Sup 7 Sec. 15 C	Tara Marik	
Salt Water	r Depth (f	t.):	1840			THUS OF UU	4 225	
		small am	ount					
ls coal being		area (N/Y)?	N			SEP 0 4 8	.012	_
Coal Depths								
(ft.):	_ N/A	<u>xxxxxxxx</u>	_		1/2	N Dobadi	nbatof	1
OPEN	EI () 12 = 5	. T. A	<u>.</u>				Protection	
OPEN	FLOW DA		Upper Elk	comingled				
		g formation		nson, Riley, B			Zone depth (ft)	2642'-527
		ial open flow	0	MCF/d Oil:				_Bbl/d
		open flow	320	MCF/d Oil:	•			_Bbl/d
		of open flow b ck Pressure				48 o\ after 49		_Hours
	JIANG 100	74 E1699016	090	-haid (aniigi	re hiessnii	C) allei <u>40</u>		Hours
	Second	producing forn	nation		Pay zone	denth (ft		
	-	tial open flow	HAUGH	MCF/d Oil:	_ ^			Bbl/d
		open flow	·	MCF/d	Final ope			
•		of open flow b	etween initia		•			– Hours
		ck Pressure		psig (surfa		e after		Hours
		: : = = = = = =	· ·	_1 = 0 (==	, p. 2			
NOTE:	ON BAC	K OF THIS FO	ORM PUT TI	HE FOLLOV	VING: 1). [DETAILS OF P	ERFORATED	
						ANGE, ETC. 2		
							FORMATIONS	,
INCLUI	DING CO	AL ENCOUNT	ERED BY T	HE WELLB	ORE.			
	Signed:	Michael	Rogers 🔨			_		
	Ву	: 17 lick	al Oce	paeis		_		
	Date	- Assessment C	0 2012	4		_		

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Stage #1: 90 Quality Foam, 20 perfs 4812-5271',92bbl H2O,no acid(in hole from cement job)26300lbs 20-40 sand,405844 SCF/N2

Stage #2: 90 Quality Foam, 20 perfs 4006-4632', 120bblH2O, 500gal, 15%HCL acid, 30600lb, 20-40 sand 798095 SCF/N2

Stage #3: 90 Quality Foam, 20 perfs, 3302-3915, 101bblH2O, 500gal 15% HCL acid, 30300lb, 20-40 sand, 552825 SCF/N2

Stage #4: 90 Quality Foam, 20 perfs, 2642-3158, 110 bbl H2O, 500 gal 15% HCL acid, 30500lb 20-40 sand, 548051 SCF/N2

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
dirt		soft	0	20	
sand		hard	20	450	·
red rock		med	450	1180	
sand & shale		med	1180	1620	
salt sand		hard	1620	1700	small amount of oil & H2O
sand & shale		med	1700	1882	
maxon		hard	1882	1960	
big lime and keener		hard	1960	2280	
big injun		soft	2280	2328	show of gas & oil
sand & shale		med	2328	2750	
berea		•	2750	2760	
sand & shale stringer	rs	med	2760	2904	
riley		soft	2904	2914	
sand & shale stringer	rs	med	2914	4130	
benson		med	4130	4150	
sand & shale		med	4150	4810	
alexandra		med	4810	4822	
sand & shale		med	4822	5052	
upper elk		med	5052	5098	
sand & shale		med	5098	5300	TD

ROGERS AND SON

Well Operator

By:

Date: August 28, 2012

State of West Virginia Division of Environmental Protection Section of Oil and Gas

API #47 - 017-06108 RECENTO Office of Oil and Gate

SEP 04 2012

ETOC 1200'

Well Operator's Report of Well Work

WV Laparmen Environmental Prote

LOCATION:

Farm Name:

Bartlett

Latitude:

Operator Well No.: One (1)

Quadrangle: New Milton 7.5

District: **New Milton**

Longitude: 80.671056

Elevation: 1128

39.23067

County: Doddridge Min. 50.4

Feet South of 39 Deg. 13 Sec. Min. 38 Feet West of 80 Deg. 42 Sec.

KEY OIL COMPANY Used Cement Company: Casing Left 22 GARTON PLAZA Fill Up & In In WESTON, WV 26452 Tubing Drilling Well Cu Ft <u>Size</u> Agent: Jan E. Chapman Inspector: **Dave Scranage** 11" 32' **Pulled** N/A Permit Issued: 03-19-12 Well Work Commenced: 08-08-12 9-5/8" 168' 168' 90 sks. CTS Well Work Completed: 08-13-12 7" Verbal Plugging N/A 1100' 1100' 180 sks. CTS Permission granted on: 05-12-12 Rotary X Cable 4-1/2" 2886' 2886' 150 sks. Rig

Total Depth (feet) 2940' Fresh water depths (ft) 92' Salt water depths (ft) 1218'

Is coal being mined in area (Y/N)? No

Coal Depths (ft):

OPEN FLOW DATA Gordon & Gordon Stray 2696-2854 Gantz 2480-2486 Weir 2273-2338

Keener & Injun 2062-2110

Producing formation Blue Monday Pay zone depth (ft) 1984-1992 Initial open flow MCF / D Oil: Initial open flow Show Gas: 97

Bbl / D Bbl / D Final open flow 1463 MCF / D Oil: Final open flow 2 Time of open flow between initial and final tests 24 Hours Hours

Static rock 300 pressure psig (surface pressure) after

All Formations Comingled.

Gas:

Second producing formation Pay zone depth (ft)

Initial open flow MCF / D Oil: Initial open flow

Final open flow MCF / D Oil: Final open flow Bbl / D Time of open flow between initial and final tests Hours

Static rock pressure psig (surface pressure) after Hours

Bbl / D

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

KEY OIL COMPANY

PRESIDENT

Date: August 28, 2012

Bartlett #1 (47-017-06108)

TREATMENT:

Gordon & Gordon Stray	(20 holes) 2696-2854	sand, water and N2: 30,100# 20/40 sand, 329,000 SCF N2, and 186 bbl. water
Gantz	(20 holes) 2480-2486	sand, water and N2: 20,000# 20/40 sand, 254,000 SCF N2, and 138 bbl. water
Weir	(20 holes) 2273-2338	sand, water and N2: 20,000# 20/40 sand, 246,000 SCF N2, and 140 bbl. water
Injun & Keener	(20 holes) 2062-2110	sand, water and N2: 27,500# 20/40 sand, 430,000 SCF N2, and 219 bbl. water
Blue Monday	(20 holes) 1984-1992	sand, water and N2: 28,500# 20/40 sand, 310,000 SCF N2, and 186 bbl. water

FORMATIONS:

Sand & Shale	0'	1250'
Salt Sand	1250'	1310'
Sand & Shale	1310'	1880'
Little Lime	1880'	1980'
Blue Monday	1980'	2000'
Shale	2000'	2060'
Keener	2060'	2090'
Injun	2090'	2130'
Sand & Shale	2130'	2280'
Weir	2280'	2360'
Shale	2360'	2480'
Gantz	2480'	2490'
Shale	2490'	2690'
Gordon	2690'	2710'
Shale	2710'	2940'
TD		2940'

API #47 - 017 - 06122

State of West Virginia Division of Environmental Protection Section of Oil and Gas

Well Operator's Report of Well Work

Farm	Name:	

Vada Barnett

Operator Well No.: One (1)

LOCATION:

Elevation: 1149

Quadrangle: Oxford 7.5

District:

New Milton

County: Doddridge

Latitude: 39.18648 Longitude: 80.75140

Feet South of

Min. 11.3 Sec. Deg. 11 Sec.

39 Feet West of Min. 05.0 80 Deg. 45

Company:	KEY OIL COMPANY	Casing	Used	Left	Cement
	22 GARTON PLAZA	&	In	ln	Fill Up
	WESTON, WV 26452	Tubing	Drilling	Well	Cu Ft
		Size	, and the second		
Agent:	Jan E. Chapman		<u> </u>		
Inspector:	Dave Scranage	11"	32'	Pulled	N/A
Permit Issued:	06-11-12				
Well Work Commence	d: 08-14-12	9-5/8"	168'	168'	70 sks. CTS
Well Work Completed:	08-19-12				
Verbal Plugging	N/A	7"	1314'	1314'	180 sks. CTS
Permission granted on	05-12-12				
Rotary X Cable		4-1/2"	2933'	2933'	160 sks.
Total Depth (feet) 30	42'				ETOC 1200'
Eroch water denths / ft	\ 4425				

Fresh water depths (ft) 115' Salt water depths (ft) 1400'

Is coal being mined in area (Y/N)? No

Coal Depths (ft): NA

RECEVED Office of OH & Gas

OPEN FLOW DATA Gordon & Gantz Weir

Iniun Keener

2194-2200 2126-2132 Pay zone depth (ft) 2056-2062

SFP # 4 2012

Producing formation Blue Monday Gas: Initial open flow

103 712

MCF / D

Oil: Initial open flow Oil: Final open flow

Show Show

2542-2776

2348-2418

WV Department of Bb//Bironmental Protection

Final open flow MCF / D Time of open flow between initial and final tests 24 Static rock 675 pressure psig (surface pressure) after 24

Hours Hours

All Formations Comingled.

Second producing formation Gas: Initial open flow

MCF / D

Pay zone depth (ft) Oil: Initial open flow

Bbl / D

Final open flow Time of open flow between initial and final tests

MCF / D

Oil: Final open flow

Bbl / D Hours

Static rock pressure

psig (surface pressure) after

Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

> KEY OIL COMPANY For:

PRESIDENT

Date: August 29, 2012

Vada Barnett #1 (47-017-06122)

TREATMENT:

Gordon & Gantz	(20 holes) 2542-2776	sand, water and N2: 30,000# 20/40 sand, 303,000 SCF N2, and 176 bbl. water
Weir	(20 holes) 2348-2418	sand, water and N2: 14,000# 20/40 sand, 250,000 SCF N2, and 126 bbl. water
Injun	(20 holes) 2194-2200	sand, water and N2: 25,000# 20/40 sand, 264,000 SCF N2, and 157 bbl. water
Keener	(20 holes) 2126-2132	sand, water and N2: 25,000# 20/40 sand, 267,000 SCF N2, and 163 bbl. water
Blue Monday	(20 holes) 2056-2062	sand, water and N2: 28,500# 20/40 sand, 257,000 SCF N2, and 181 bbl. water

FORMATIONS:

Sand & Shale	0,	1300'
Salt Sand	1300'	1400'
Shale	1400'	1600'
Sand & Shale	1600'	1840'
Shale	1840'	2040'
Blue Monday	2040'	2070'
Lime	2070'	2100'
Keener	2100'	2140'
lnjun	2140'	2200'
Sand & Shale	2200'	2340'
Weir	2340'	2430'
Shale	2430'	2540'
Gantz	2540'	2550'
Shale	2550'	2770'
Gordon	2770'	2780'
Shale	2780'	3040'
TD		3040'

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm name: National Timber Partners WV 3 LLC.	Operator Well No.: Withers # 1-U					
LOCATION: Elevation: 1282'	Quadrangle: Gilmer 7.5					
District: Glenville	Count	y: Gilmer				
Latitude: 13,100' Feet South of			Min. 00	Sec.		
Longitude 3,000' Feet West of		Deg. 42		Sec.		
2008,0000 2000 1000 01			27221	200		
Company:	l	1	1	درس ما		
Horizon Energy Corporation	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.		
Address:						
Sand Fork Rd. Box 111 Sand Fork, WV 26430						
Agent: Robert R. Jones II						
Inspector: Joe McCourt	9 5/8	631	631	280 sks		
Date Permit Issued: 05/23/2012						
Date Well Work Commenced: 07-23-2012	6 5/8	714	714	150 sks		
Date Well Work Completed: 07-28-2012						
Verbal Plugging:	4 1/2	3341	3273	85 sks		
Date Permission granted on:						
Rotary X Cable Rig						
Total Depth (feet): 3341		marks Balli of Pale				
Fresh Water Depth (ft.): N/A		755-20				
		Office of	CHO WAR			
Salt Water Depth (ft.): N/A						
		SEP	4 2012			
Is coal being mined in area (N/Y)? N		المستاري	<u> </u>			
Coal Depths (ft.): N/A		en er e p ^{ost} i ander	administ M			
		AAA MAA	arineni di	i en an		
The state of the s	1 (m/s)	www.come	ital Protect	#18.50 B		
OPEN FLOW DATA						
Producing formation 5 th Sand	Dov. zana da	onth (ft) 2162	2172 ft			
	•	pth (ft) 3163-				
Gas: Initial open odor MCF/o	a Oii; initiai o	pen flowsl	nowBbi/a			
		en flow6_				
Time of open flow between initial and i	•					
Static rock Pressure 610# psig (surface	pressure) afte	r 48 Hour	'S -	•		
	D 1	d (6)	c			
Second producing formation	Pay zone de		ft.			
Gas: Initial open flowMCF/d Oil:		pen flow	Bbl/d			
Final open flow MCF/d Final open flow Bbl/d						
Time of open flow between initial and t						
Static rock Pressurepsig (surfac	e pressure) af	terHo	urs			
* = commingled zones	3	•				
NOTE: ON BACK OF THIS FORM PUT THE A						
INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL						
LOG WHICH IS A SYSTEMATIC DETAILED	GEOLOGICA	L RECORD O	F ALL FORMAT	TIONS,		
Signed:						
	, PRESIDEM	NT				
Date: 8-30-2012				-		

Withers #1-U 47-021-05744 08-06-2012

Stage # 1	<u>perfs</u>	<u>sand</u>	avg rate	<u>isip</u>
46.				
5 th Sand	3163-3173	510 sks	27.0 bpm	# 1100

<u>ps</u>
2316
3156

State of West Virginia Department of Environmental Protection Office of Oil and Gas

DATE: 08-09-2012 API # 47-021-05745 Office of Oil and Sas

SEP 0 4 2012

Well Operator's Report of Well Work

Farm name: National Timber Partners WV 3 LLC.	Operator Well No.: Withers # Ly WV Deposition of					
LOCATION: Elevation: 1274'	Quadrangle: Gilmer 7.5					
District: Glenville	Coun	ty: Gilmer		•		
Latitude: 12,350' Feet South of	38		Min. 00	Sec.		
Longitude 5,480' Feet West of	80		Min. 30	Sec.		
Company:	1			1		
Horizon Energy Corporation	Casing &	Used in	Left in well	Cement fill		
	Tubing	drilling		up Cu. Ft.		
Address:						
Sand Fork Rd. Box 111 Sand Fork, WV 26430		ļ				
Agent: Robert R. Jones II						
Inspector: Joe McCourt	9 5/8	631	631	220 sks		
Date Permit Issued: 05/23/2012						
Date Well Work Commenced: 07-31-2012	6 5/8	747	747	150 sks		
Date Well Work Completed: 08-05-2012		<u> </u>				
Verbal Plugging:	4 1/2	3319	3272	85 sks		
Date Permission granted on:						
Rotary X Cable Rig						
Total Depth (feet): 3319	<u> </u>					
Fresh Water Depth (ft.): N/A						
Salt Water Depth (ft.): N/A						
	ļ					
Is coal being mined in area (N/Y)? N				<u> </u>		
Coal Depths (ft.): N/A						
	I	1	1	1		
ODENI EL OUI DATA						
OPEN FLOW DATA						
Producing formation 5 th Sand	Doy zona d	epth (ft) 3147	.3158 ft			
		open flows				
		en flow5				
♣						
Time of open flow between initial and				•		
Static rock Pressure 580# psig (surface	pressure) are	er 48 Hou	rs .			
O 1 1 1 C II Tulius	n 4	4- (B) 240E	2502 &			
1 6	•	epth (ft) 2495				
Gas: Initial open flow MCF/d Oil:		open flow				
Final open flow MCF/d		pen flow		·		
Time of open flow between initial and	rınal tests	Hou	rs			
Static rock Pressurepsig (surface	ce pressure) a	itterHo	ours			
* = commingled zones		. 1) DOMEST C	OF DEDEOD AC	'ED		
NOTE: ON BACK OF THIS FORM PUT THE	FULLOWING	: 1). DETAILS	OF PERFORAL	בט בוו		
INTERVALS, FRACTURING OR STIMULATING LOG WHICH IS A SYSTEMATIC DETAILED	CEOLOGICA	AL CHANGE, I	DIC. 23. IEE W E ATT EODMA'	LIONS		
LOG WHICH IS A SYSTEMATIC DETAILED	GEOLOGICA	L KECUKD U	T ALL FURMA	LIONS,		
Signed		•				
Signed: By ROBERT R LOYES I	T_ PRESIDI	TNT				

Date:

8-30-2012

Withers #1-V 47-021-05745 08-09-2012

perfs	sand	avg rate	<u>isip</u>
3147-3158	500 sks	26.2 bpm	# 1813
2495-2503	350 sks	27.5 bpm	# 1383
	3147-3158	3147-3158 500 sks	3147-3158 500 sks 26.2 bpm

Drillers Log				Electric Log	<u> Cops</u>
Clay Sd/sh Sd/sh Sd/Sh LL Sd/Sh Bl Injun Sd/Sh	0 10 30 561 2248 2262 2310 2481 2500	10 30 561 2248 2262 2310 2481 2500 3143	gas ck @ 2242 = odor gas ck @ 2515 = odor gas ck @ 2918 = odor	Big Lime 5 th Sand	2310 3143
5 th Sand Sd/Sh	3143 3156	3156 3319			•
Tđ	3319 ft	<u>-</u>	gas ck @ td =oil / gas odd	nr	

DATE: 3/30/12

API#: 47-035-02999

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm name:Dwight & Lori Anderson	Ope	erator Well No	.:HR 456_			
LOCATION: Elevation:644'	Qua	drangle:	Liverpool W	(V 7.5'		
District: Ravenswood Latitude: 9964 Feet South of 38 D	Cor	anty:	Jackson			
Latitude: 9964 Feet South of 38 D	Deg. 57 Mi	n. 30 Sec.				
Longitude_3693_Feet West of 81_D	eg. 35 Min.	00 Sec.				
· —	-	-				
Company:Hard Rock Exploration						
	Casing &	Used in	Left in well	Cement fill		
	Tubing	drilling		up Cu. Ft.		
Address: 1244 Martins Branch Road						
Charleston WV, 25312	20"	25	25	N/A		
Agent: Marc Scholl	13 3/8"	84	84	135ft3 CTS		
Inspector: Jamie Stevens	9 5/8"	603	603	300 ft3 CTS		
Date Permit Issued: 8/30/11	7"	2374	2374	516 ft3 CTS		
Date Well Work Commenced: 1/12/12	4.5"	7231	7231	130 ft3		
Date Well Work Completed: 1/31/12				<u>i </u>		
Verbal Plugging:	Ran Gamma	Log from KO	P(3439' – 4093'T	VD)		
Date Permission granted on:						
Rotary x Cable Rig						
Total Depth (feet): 7312'TMD, 4112'TVD						
Fresh Water Depth (ft.): 40'						
Salt Water Depth (ft.): 1074', 1683'						
Is coal being mined in area (N/Y)? N						
Coal Depths (ft.): N/A	,,,					
, , , , , , , , , , , , , , , , , , , ,	•	•	•	•		
OPEN FLOW DATA						
Producing formationLower Huron_Sh	nale_Pay zone					
Case Initial an an flam toward MCE/4 O	di vatetat i i i i		963'TVD - 41	12. 1 1 1		
Gas: Initial open flow_traceMCF/d O	ii: initial open	now	Bbi/d			
Final open flow 1500+ MCF/d	Final open 1	low	Bbl/d			
Time of open flow between initial and	l final tests	_72£	lours			
Static rock Pressure psig (surfa	ice pressure) a	fterHo	urs 🔿			
			200 E (Toe of Oil & Gas		
Second producing formation		ne depth (ft)_				
Gas: Initial open flowMCF/d Oil			Bbl/d	APR 0 2 2012		
Final open flowMCF/d	Final open flov	<i>w</i>	Bbl/d			
Time of open flow between initial and	final tests	Hot	urs V/V	F FFATT SEPTEMBER		
Static rock Pressure psig (surfa	ice pressure) a	fter H	ours Environ	Department of		
Time of open flow between initial and Static rock Pressurepsig (surfa	′			THE POSTER		
NOTE: ON BACK OF THIS FORM PUT THE	FOLLOWING:	: 1). DETAILS	S OF PERFORAT	ED		
INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL						
LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS,						
INCLUDING COAL ENCOUNTERED BY THE WELLBORE.						
Signed: Junes Joyle	<u> </u>			•		
By: Profident	/					
Date: 3/30/ 2012						

Top:	Bottom:
0	1645
1645	1850
1850	1890
1890	1935
1935	2310
2310	2330
2330	4112
4020	4112
	0 1645 1850 1890 1935 2310 2330

All depths shown As TVD

01/23/12. Run total of 168jts of R-3 4.5" 11.6ppf N80 casing to depth of 7231'. Run a 14 stg Packers Plus completion system. ND BOP and flange up 10k valve. RU Baker cmt crew and start pumping N2 with toe sub balls and pressure casing up to 3000psi. Shut down and hold pressure for 15 – 20 min. Start pumping N2 and pressure up to 3450psi to open shoe. Pumped total of 128k scf N2. RD N2 equipment and RU to 4X7 annulus. Dump squeeze with 100sx mixed at 15ppg. Follow cmt with 3bbl water.

	Sleeve	Sleeve Size	Packers	
Stage 1	P/O Shoe	N/A	7058	
Stage 2	6924	1.375	6835	
Stage 3	6701	1.625	6613	
Stage 4	6520	1.750	6390	
Stage 5	6297	1.875	6167	
Stage 6	6074	2.000	5902	
Stage 7	5768	2.125	5679	may have been been the property
Stage 8	5545	2.375	5456	
Stage 9	5364	2.500	5233	Office of Oil & Gas
Stage 10	5099	2.750	4968	
Stage 11	4834	2.875	4745	APR 02 2012
Stage 12	4611	3.125	4523	
Stage 13	4389	3.250	4258	to the first the major or other texts and the
Stage 14	4166	3.500	4035	Wy Department of
Anchor			2687	Environmental Profession

01/30/12 - 1/31/12 MIRU Baker Stim crew. Start pumping half rate and work rate up to 101k scf/min as pressure allowed. Pump total of 1MM scf N2. Drop ball for Stg 2 and wait 10 min. Start pumping at 20k scf/min, and land ball and open sleeve at 4762psi. Up rate and pump total of 1MM scf N2. Shut down and drop ball for Stg 3. Wait 10min. Repeat process for Stgs 3-14.

	Stg 1	Stg 2	Stg 3	Stg 4	Stg 5	Stg 6	Stg 7
Max P	5972	5893	6096	5579	5652	5357	5193
Avg P	5658	5802	5902	5524	5545	5310	5162
Max R	102.8	103.4	102.4	108.0	112.0	111.3	106.0
Avg R	97.2	101.9	86.8	106.0	109.0	109.9	105.0
5 min	2180	2247	N/A	N/A	2275	2254	2298
	Stg 8	Stg 9	Stg 10	Stg 11	Stg 12	Stg 13	Stg 14
Max P	Stg 8 5192	Stg 9 4877	Stg 10 4717	Stg 11 4508	Stg 12 4704	Stg 13 4317	Stg 14 3967
Max P Avg P	-		_	_	_	-	_
	5192	4877	4717	4508	4704	4317	3967
Avg P	5192 5149	4877 4838	4717 4681	4508 4415	4704 4672	4317 4277	3967 3945

DATE: 08-16-2012 API # 47-041-05652

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Coastal Timber Lands Co.	Oper	rator Well No.	: Butcher #4	
LOCATION: Elevation: 826'	Qua	drangle: Gilm	er 7.5	
District: Court House Latitude: 3,000' Feet South of Longitude 6,800' Feet West of	of 38	ty: Lewis Deg. 5 Deg. 3) Sec.
Company:				
Horizon Energy Corporation	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address:				
Sand Fork Rd. Box 111 Sand Fork, WV 2643	10			
Agent: Robert R. Jones II				100
Inspector: Joe McCourt	9 5/8	168	168	100 sks
Date Permit Issued: 06-13-2011	5 7 15			1/- 1
Date Well Work Commenced: 08-07-2012	6 5/8	840	840	145 sks
Date Well Work Completed: 08-12-2012	4.1/0	2055	2654	0.5 -1
Verbal Plugging:	4 1/2	2855	2654	85 sks
Date Permission granted on:		 ,		-
Rotary X Cable Rig		New York	Part Part	
Total Depth (feet): 2855 Fresh Water Depth (ft.): N/A				
Fresh water Depth (it.): IVA		1 Braid State LAS	Ville Coll Confidence	
Salt Water Depth (ft.): N/A		SEP (a 4 2012	
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): N/A		WY Dan		
Coal Depths (16). 19/A		es estat de la companya de la compa		
OPEN FLOW DATA				
Producing formation Gordan Sand Gas: Initial open odor M Final open flow 300 M Time of open flow between initial Static rock Pressure 450# psig (su	MCF/d Oil: Initial ICF/d Final or l and final tests	open flow_sl ben flow _8H	howBbl/d 5Bbl/d Hours	
Second producing formation Injun Gas: Initial open flowMCF/d Final open flowMCF/d Time of open flow between initia Static rock Pressurepsig (* = commingled zones NOTE: ON BACK OF THIS FORM PUT INTERVALS, FRACTURING OR STIMUL LOG WHICH IS A SYSTEMATIC DETA	Oil: Initial of Final of I and final tests_surface pressure) at THE FOLLOWING LATING, PHYSICA	open flow	Bbl/d Bbl/d Ours Hours LS OF PERFORAT , ETC. 2). THE W	ELL
Signed:	EC II DECIDE	NT		

Date:

8-30-2012

Butcher # 4 47-041-05652 08-16-2012

Stage # 1	<u>perfs</u>	sand	avg rate	<u>isip</u>
Gordan	2549-2553	354 sks	27.1 bpm	# 2411
Stage # 2				
Injun	2038-2053	503 sks	26.7 bpm	# 1279

Drillers Log				Electric Log	<u> Tops</u>
Clay	0	10			
Sd/sh	10	30		Big Lime	1870
Sd/sh	30	840		Gordan	2544
Sd/Sh	840	1824			
LL	1824	1835			
Sd/Sh	1835	1870	•		
Bl	1870	2034	gas ck @ 2142 = odor		
Injun	2034	2054	gas ck @ 2514 = odor		
Sd/Sh	2054	2544	gas ck @ 2823 = odor		
Gordan	2544	2554			
Sd/Sh	2554	2855			
Td	2855 fi	t.	gas ck @ td =oil / gas odo	r	

WR-35 Rev (5-01) DATE: <u>9/25/2007</u> API#: <u>47-6101550</u>

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm name: Huskie Lumber Company		Oper	ator Well	No.:	SC-2	
LOCATION: Elevation: 1414'		_Quad	lrangle: _	Hund	red	
District: _Battelle		Com	nty: <u>Moi</u>	ana a	iio	
Latitude: 39 Feet So	wth of	40°	Dog	10HZAI	Min.	Saa
Longitude: 80 Feet We	est of	22'	Deg	30"	Min.	Sec.
Company: CNX Gas Company, LLC						
	Casing Tubing	&	Used in drilling		Left in well	Cement Fill Up (# of Sacks)
Address: 2481 John Nash BLVD	13 3/		42'		42'	Sanded In
Bluefield,WV 24701	9 5/8	3"	399	7	399'	140sks
Agent: Les Arrington	7"		1480)'	1480'	145 sks
Inspector: Bill Hatfield						
Date Permit Issued: July 26,2007						
Date Well Work Commenced: 8/16/2007						
Date Well Work Completed: 8/31/2007					ng ang paga	75 75
Verbal Plugging: N/A					Particular Section Section 1999	F1
Date Permission granted on: N/A			<u> </u>	4		
Rotary Cable Rig						
Total Depth (feet): 2026'					SEP @ 9-200	2
Fresh Water Depth (ft.): 300'					· · · · · · · · · · · · · · · · · · ·	****
	 			N O O	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	37 ST
Salt Water Depth (ft.): N/A	ļ			140		
Is coal being mined in area (N/Y)? Y			Care e	0 <u>0.5 00.6</u> 0 연합설계원		. Bellig GM
Coal Depths (ft.): 837'1144'1242'			<u> </u>			
OPEN FLOW DATA						
Producing formation Pittsburgh Coal		dep	th (ft)	1242		
Gas: Initial open flow N/A MCF	d Oil: Init	ial op	en flow	N/A	Bbl/d	
Final open flow N/A MCF/d	Final ope	en flov	v N/A	7	Bbl/d	
Time of open flow between initial and fir	nal tests	N/A	\	Hour	 S	
Static rock Pressure N/A psig (sur	face press	ure) at	fter N/A	-	Hours	
<u> </u>	_		_		_	
Second producing formation_Upper Freepo	ort Coal			Pay 2	one depth (ft)	1750'
Gas: Initial open flow N/A MCF/d O	il: Initial o	open f	low N/A	4.	Bbl/d	
Final open flow N/A MCF/d	Final ope	n flov	v N/A		Bbl/d	
Time of open flow between initial and fin	al tests	N/A		Hour	5	
Static rock Pressure_N/Apsig (surfa					Hours	
A COMP. ON DA CHE OF THE COMPA DE THE CENTER OF THE	TTOMBIC	. 1\ 7	STOP A TY OL.	~r nr	7777	
NOTE: ON BACK OF THIS FORM PUT THE FO INTERVALS, FRACTURING OR STIMULATING						
LOG WHICH IS A SYSTEMATIC DETAILED GI						
INCLUDING COAL ENCOUNTERED BY THE WI				سلامه ه	i olamations,	
Gas Well DOE MH-13 (API No. 47-61015			ontal we	ll for	CNX Gas Co	mpany.
LLC. Refer to the attached information						
Sin Brott Clans						
Signed: Off Farming Drilling Manager			_			
Date: 9/25/2007			-			
Date						

St. Cloud CBM Well No.SC2 PG Drill Log API# 47-6101550

Description	Depth
FIII	0-10'
Shale	10-25'
Sand	25'-30'
Shale	30'-40'
Sand	40'-50'
Red Rock	50'-60'
Sand	60'-90'
Shale	90'-185'
Sand	185'-250'
Shale	250'-310'
Sand	310'-340'
Shale	340'-390'
Sand	390'-455'
Shale	455'-510'
Sand	510'-560'
Shale	560'-635'
Sand	635'-670'
Shale	670'-750'
Sand	750'-790'
Shale	790'-870'
Sand	870'-910
Shale	910'-965'
Sand	965'-990'
Shale	990'-1035'
Sand	1035'-1070'
Shale	1070'-1105'
Sand	1105'-1160'
Coal	1160'-1165'
Shale	1165'-1180'
Sand	1180'-1235'
Coal	1235'-1243'
Shale	1243'-1360'
Sand	1360'-1400'
Shale	1400'-1470'

TD Of Well

WR-35 Rev (5-01) DATE: <u>9/25/2007</u> API#: <u>47-6101551</u>

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm name: Huskie Lumber Company	Ope	rator Well No.	SC-2 A	
LOCATION: Elevation: 1409'	Qпа	drangle: <u>Hun</u>	dred	
District: Battelle	Con	inty: Monong	alia	
Latitude: 39 Feet Sou		Deg00		Sec.
Longitude: 80 Feet We			"Min	Sec.
Company: CNX Gas Company, LLC		······································		
	Casing & Tubing	Used in drilling	Left in well	Cement Fill Up (# of Sacks)
Address: 2481 John Nash BLVD	9 5/8"	42'	42'	Sanded In
Bluefield,WV 24701	7"	974.6	974.6	145 sks
Agent: Les Arrington				
Inspector: Bill Hatfield				
Date Permit Issued: July 26,2007				
Date Well Work Commenced: 8/16/2007				
Date Well Work Completed: 8/31/2007				
Verbal Plugging: N/A		Sept.	Commence and the	
Date Permission granted on: N/A		275.413	Edit (E.)	
Rotary Cable Rig		CANECAC		
Total Depth (feet): 2026'				
Fresh Water Depth (ft.): 300'		51	- 0 4 / 11/	
Salt Water Depth (ft.): N/A		SAGE C		
			April 100	
Is coal being mined in area (N/Y)? Y		ALT WILLIE	Ner en ikante	
Coal Depths (ft.): 837'1144'1242'				
OPEN ET OTT DATA				
OPEN FLOW DATA		-4- (A) 104	32	
Producing formation <u>Pittsburgh Coal</u>	aej	nn (m)124.	4.4	
Gas: Initial open flow N/A MCF/	d On: mitial of	pen nowN	ABoi/d	
Final open flow N/A MCF/d	rinai open flo	wN/A	Bbl/d	
Time of open flow between initial and fin	al testsN/	AHot	ırs	
Static rock Pressure N/A psig (surf	face pressure) a	ifter_N/A	Hours	
Second producing formation_Upper Freepo	rt Coal	Pay	zone depth (ft)_	_1750'
Gas: Initial open flow_N/AMCF/d Oi	il: Initial open	flow_N/A	Bbl/d	
Final open flow N/A MCF/d	Final open flo	wN/A	Bb1/d	
Time of open flow between initial and fin Static rock Pressure_N/Apsig (surfa	al testsN/A	Hou	ırs	
Static rock Pressure_N/Apsig (surfa-	ce pressure) af	terN/A	_Hours	
; 				
NOTE: ON BACK OF THIS FORM PUT THE FOI				
INTERVALS, FRACTURING OR STIMULATING,				•
LOG WHICH IS A SYSTEMATIC DETAILED GE INCLUDING COAL ENCOUNTERED BY THE WE		COKD OF AL	L COUVEATIONS	
Gas Well DOE MH-13 (API No. 47-61015		rontal well f	r CNY Coe C	Amnany
LLC. Refer to the attached information f	•			опфану,
LLC. Refer to the attached information i	or additions	t mitolinatio	π.	
Signed: Coff Janne				
By: Geoff Familiag Drilling Manager				
Date: 9/25/2007				

St. Cloud CBM Well No.SC2 Access PG Drill Log API# 47-6101551

T-0-11	.1
Fill	0-10'
Shale	10-25'
Sand	25'-30'
Shale	30'-40'
Sand	40'-50'
Red Rock	50'-60'
Sand	60'-90'
Shale	90'-185'
Sand	185'-250'
Shale	250'-310'
Sand	310'-340'
Shale	340'-390'
Sand	390'-455'
Shale	455'-510'
Sand	510'-560'
Shale	560'-635'
Sand	635'-670'
Shale	670'-750'
Sand	750'-790'
Shale	790'-870'
Sand	870'-910
Shale	910'-965'
Sand	965'-990'
Shale	990'-1035'
Sand	1035'-1070'
Shale	1070'-1105'
Sand	1105'-1160'
Coal	1160'-1165'
Shale	1165'-1180'
Sand	1180'-1235'
Coal	1235'-1243'
And the state of t	

PECENTED Office of the ANALYSISTEM OF THE PERSON OF THE PE

WR-35 Rev (9-11)

State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	1-31-2012	i de la companya de l
API#:	47-061-01621	

Farm name: Reliance Minerals Inc	Mon	Oper	ator Well No.: 3	H (833041)	
LOCATION: Elevation: 1321'		Quad	lrangle: Morganto	own South	
District: Clinton		Coun	nty: Monongalia		
			Min. 30	Sec.	
Latitude: 5123'	Feet South of 39	Deg. 32	TATITI	500.	

Chesapeake Appalachia, L.L.C.

Address: P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Oklahoma City, OK 73154-0496	13 3/8"	529'	529'	559 cf
Agent: Eric Gillespie	9 5/8"	3082'	3082'	1325 cf
Inspector: Sam Ward	5 1/2"	15615	15615'	3783 cf
Date Permit Issued: 2/14/2011				
Date Well Work Commenced: 5/2/2011				
Date Well Work Completed: 7/29/2011				
Verbal Plugging:				
Date Permission granted on:				
Rotary Cable Rig				
Total Vertical Depth (ft): 7567'				
Total Measured Depth (ft): 15620'				
Fresh Water Depth (ft.): 400'			par var	د میر
Salt Water Depth (ft.): None		·)	
Is coal being mined in area (N/Y)? N			700 700 700 700 700 700 700 700 700 700	
Coal Depths (ft.): 161'			profit profit toppid	المبيلا وكالمرازة أأ
Void(s) encountered (N/Y) Depth(s) N			ر 1970 ما	

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet) Producing formation Marcellus Pay zone depth (ft) 7,666'-15,493' Gas: Initial open flow MCF/d Oil: Initial open flow Final open flow 2,708 MCF/d Final open flow _____Bbl/d Time of open flow between initial and final tests Static rock Pressure 4,919 psig (surface pressure) after Hours Second producing formation Pay zone depth (ft) Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d Final open flow_____MCF/d Final open flow Bbl/d Time of open flow between initial and final tests Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marley (1211 cans

	No X Were cuttings caus	ght during drilling? Yes X No
Vere Electrical, Mechanical or Geophysi	ical logs recorded on this well? If yes, please	_{list} none
NATE. IN THE ADEA DELOW	BITT THE EAT ONLINE A DECLAR	
FRACTURING OR STIMULATING, DETAILED GEOLOGICAL RECOI	PUT THE FOLLOWING: 1). DETAIN PHYSICAL CHANGE, ETC. 2). THE WI RD OF THE TOPS AND BOTTOMS OF ELLBORE FROM SURFACE TO TOTAL	ELL LOG WHICH IS A SYSTEMATIC OF ALL FORMATIONS, INCLUDING
Perforated Intervals, Fracturing, or Stimu	lating:	
See Attached)		
		A Street
		MAR 30 3 Gas
		5012
Plug Back Details Including Plug Type ar	nd Depth(s): Cement @ 15,523'	The state of the s
Formations Encountered:	Top Depth /	Bottom Depth
Surface:		
See attached)		
·		c. 6
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	Management and the second seco	

FORMATION/LITHOLOGY	TOP DEPTH (ft)	BOTTOM DEPTH (ft)
SS and Sltst	0	161
Pittsburgh Coal	161	171
Shale and Sltst w/ minor SS	171	560
Shale and SS	560	980
LS and Shale	980	1154
Big Injun	1154	1430
Shale w/ SS and minor Sltst	1430	2720
Sltst w/ minor Shale	2720	2970
Shale w/ minor Sltst	2970	4620
Shale	4620	7038
Geneseo	7038	7067
Tully	7067	7127
Hamilton	7127	7443
Marcellus	7443	15620

PERFORATION RECORD ATTACHMENT

Well Name and Number: Reliance Minerals Inc Mon 3H (833041)

PERFO	RATION R	ECORD			S	TIMULATION	ON RECORD)	~~	
	Interval F	erforated			***	Fi	luid	Proppin	g Agent	Average
Date	From	То	Date	Interval	Treated	Туре	Amount	Туре	Amount	Injection
7/29/2011	15,171	15,493	7/29/2011	15,171	15,493	Slk Wtr	9,492	Sand	340,403	79.0
8/9/2011	14,316	14,698	8/9/2011	14,316	14,698	Slk Wtr	10,737	Sand	579,300	77.0
8/10/2011	13,841	14,223	8/10/2011	13,841	14,223	Slk Wtr	8,049	Sand	568,280	70.0
8/10/2011	13,366	13,748	8/10/2011	13,366	13,748	Slk Wtr	9,789	Sand	453,506	79.0
8/11/2011	12,891	13,273	8/11/2011	12,891	13,273	Slk Wtr	10,747	Sand	570,274	69.0
8/11/2011	12,416	12,798	8/11/2011	12,416	12,798	Slk Wtr	13,885	Sand	573,360	72.0
8/12/2011	11,947	12,323	8/12/2011	11,947	12,323	Slk Wtr	12,781	Sand	570,020	74.0
8/12/2011	11,466	11,848	8/12/2011	11,466	11,848	Slk Wtr	13,573	Sand	572,220	74.0
8/13/2011	10,991	11,367	8/13/2011	10,991	11,367	Slk Wtr	11,593	Sand	570,080	72.0
8/13/2011	10,516	10,898	8/13/2011	10,516	10,898	Slk Wtr	9,504	Sand	570,700	72.0
8/13/2011	10,048	10,423	8/13/2011	10,048	10,423	Slk Wtr	9,846	Sand	576,860	77.0
8/14/2011	9,562	9,948	8/14/2011	9,562	9,948	Slk Wtr	16,315	Sand	572,520	68.0
8/15/2011	9,091	9,473	8/15/2011	9,091	9,473	Slk Wtr	10,250	Sand	570,620	73.0
8/15/2011	8,616	9,000	8/15/2011	8,616	9,000	Slk Wtr	10,082	Sand	570,180	75.0
8/16/2011	8,141	8,523	8/16/2011	8,141	8,523	Slk Wtr	9,436	Sand	571,780	74.0
8/16/2011	7,666	8,048	8/16/2011	7,666	8,048	Slk Wtr	9,194	Sand	578,300	77.0

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WR-35 Rev (9-11)

State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	1-31-2012	
API#:	47-061-01614	

TION: Elevation: 1321'	Quadrangle:	Morgantown Sou	th	
District: Clinton	County: Mone			
		1, 30 Se		
Longitude 11861' Feet West of 79 D	eg. 57 Mir	1. 30 Se	c.	
Chesapeake Appalachia, L.L.C.				
Address: P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Oklahoma City, OK 73154-0496	13 3/8"	525'	525'	590 cf
Agent: Eric Gillespie	9 5/8"	2986'	2986'	1373 cf
Inspector: Tristan Jenkins	5 1/2"	15029'	15029'	3804 cf
Date Permit Issued: 12/10/2010				
Date Well Work Commenced: 4/2/2011				
Date Well Work Completed: 7/30/2011				
Verbal Plugging:				
Date Permission granted on:				
Rotary Cable Rig				
Total Vertical Depth (ft): 7,261'				
Total Measured Depth (ft): 15,037'				
Fresh Water Depth (ft.): 400'				
Salt Water Depth (ft.): None				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 161'				
Void(s) encountered (N/Y) Depth(s) N				
	ay zone depth (ft)	7,798'-14,894'	-	ŕ
Gas: Initial open flow 1,844 MCF/d Oil: Initial ope Final open flow MCF/d Final open f			A Part	Page 1
Time of open flow between initial and final tests		3	C/Res	
Static rock Pressure 4,720 psig (surface pressure)		ırs	MAr	
Second producing formationPay	zona donth (A)		MAR WAY DEDE	2012
Gas: Initial open flow MCF/d Oil: Initial open		bl/d		15/2/2020 2/2/2020
Final open flowMCF/d Final open f		ol/d	Company of the second	CHANNE ON

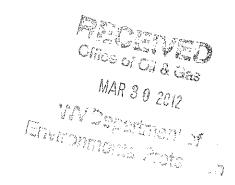
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marline Millianas
Signature

<u>3-29-3012</u> Date

Were core samples taken? Yes1	No_X	Were cuttings caught dur	ing drilling? YesX	No
Were Electrical, Mechanical or Geophysi INDUCTION, SONIC SCANNER, FMI	cal logs recorded on this w	ell? If yes, please list GI	R, NEUTRON, DE	NSITY
NOTE: IN THE AREA BELOW FRACTURING OR STIMULATING, DETAILED GEOLOGICAL RECO COAL ENCOUNTERED BY THE W.	PHYSICAL CHANGE, RD OF THE TOPS AN	ETC. 2). THE WELL I D BOTTOMS OF AL	OG WHICH IS A SYLL FORMATIONS,	YSTEMATIC
Perforated Intervals, Fracturing, or Stimu	lating:			
(See Attached)				
				_
Discount Date in Landau Discount Town	10.4()			
Plug Back Details Including Plug Type at	od Depth(s): Cement @) 14,939'		
Formations Encountered:	Top Depth	/	Bottom I	<u>Depth</u>
Surface:				
(See Attached)			-	
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	Annual Control of the			
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		Life	and the second	
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FORMATION/LITHOLOGY	TOP DEPTH (ft)	BOTTOM DEPTH (ft)
SS and Sltst	0	161
Pittsburgh Coal	161	171
SS and Sltst	171	240
Shale and minor Coal	240	300
Shale and SS w/ minor Sltst	300	680
Shale	680	760
SS and minor Shale	760	980
LS and SS	980	1144
Big Injun	1144	1440
SS and minor Shale	1440	1500
Shale and minor SS	1500	2060
SS, Shale, and minor Sltst	2060	2850
Shale w/ minor Sltst	2850	7021
Geneseo	7021	7070
Tully	7070	7156
Hamilton	7156	7440
Marcellus	7440	15105



PERFORATION RECORD ATTACHMENT

Well Name and Number: Reliance Minerals 8H (832598)

61-1614

Date Fr 7/30/2011 14, 7/31/2011 14, 7/31/2011 13, 8/1/2011 12, 8/2/2011 12, 8/4/2011 11, 8/4/2011 11, 8/5/2011 10, 8/5/2011 9,6 8/6/2011 9,2	4,572 14, 4,100 14, 3,622 14, 3,147 13, 2,667 13, 2,073 12, 1,598 11,	0 894 7/3 479 7/3 004 7/3 529 8/ 054 8/	Date 50/2011 31/2011 31/2011 1/2011	Interval 14,572 14,100 13,622 13,147	Treated 14,894 14,479 14,004	Type Slk Wtr Slk Wtr	uid Amount 7,841 13,505	Proppin Type Sand Sand	Amount 409,680	Average Injection 83.0
7/30/2011 14, 7/31/2011 14, 7/31/2011 13, 8/1/2011 12, 8/1/2011 12, 8/2/2011 11, 8/4/2011 11, 8/5/2011 10, 8/5/2011 9,6 8/6/2011 9,2	4,572 14, 4,100 14, 3,622 14, 3,147 13, 2,667 13, 2,073 12, 1,598 11,	894 7/3 479 7/3 004 7/3 529 8/ 054 8/	30/2011 31/2011 31/2011 1/2011	14,572 14,100 13,622	14,894 14,479	Slk Wtr Slk Wtr	7,841	Sand		Injection
7/31/2011 14, 7/31/2011 13, 8/1/2011 13, 8/1/2011 12, 8/2/2011 12, 8/4/2011 11, 8/4/2011 11, 8/5/2011 10, 8/5/2011 9,6 8/6/2011 9,2	1,100 14, 3,622 14, 3,147 13, 2,667 13, 2,073 12, 1,598 11,	479 7/3 004 7/3 529 8/ 054 8/	1/2011 1/2011 1/2011	14,100 13,622	14,479	Slk Wtr		Sand	409,680	
7/31/2011 13, 8/1/2011 13, 8/1/2011 12, 8/2/2011 12, 8/4/2011 11, 8/4/2011 11, 8/5/2011 10, 8/5/2011 10, 8/5/2011 9,6 8/6/2011 9,2	3,622 14, 3,147 13, 2,667 13, 2,073 12, 1,598 11,	004 7/3 529 8/ 054 8/	31/2011 1/2011	13,622			13.505	Sand		UU.U
8/1/2011 13, 8/1/2011 12, 8/2/2011 12, 8/4/2011 11, 8/4/2011 11, 8/5/2011 10, 8/5/2011 10, 8/5/2011 9,6 8/6/2011 9,2	3,147 13, 2,667 13, 2,073 12, 1,598 11,	529 8/ 054 8/	1/2011		14 004			Our id	574,340	80.0
8/1/2011 12, 8/2/2011 12, 8/4/2011 11, 8/4/2011 11, 8/5/2011 10, 8/5/2011 9,6 8/6/2011 9,2	2,667 13, 2,073 12, 1,598 11,	054 8/		13 1/17	, 17,00 1	Slk Wtr	12,645	Sand	576,240	86.0
8/2/2011 12, 8/4/2011 11, 8/4/2011 11, 8/5/2011 10, 8/5/2011 10, 8/5/2011 9,6 8/6/2011 9,2	2,073 12, 1,598 11,		1/2011	13,141	13,529	Slk Wtr	10,267	Sand	576,280	86.0
8/4/2011 11, 8/4/2011 11, 8/5/2011 10, 8/5/2011 10, 8/5/2011 9,6 8/6/2011 9,2	1,598 11,	455 8/	114011	12,667	13,054	Slk Wtr	9,912	Sand	570,640	84.0
8/4/2011 11, 8/5/2011 10, 8/5/2011 10, 8/5/2011 9,6 8/6/2011 9,2		.50 572	2/2011	12,073	12,455	Sik Wtr	9,456	Sand	578,980	88.0
8/5/2011 10, 8/5/2011 10, 8/5/2011 9,6 8/6/2011 9,2		980 8/4	4/2011	11,598	11,980	Slk Wtr	9,670	Sand	577,100	86.0
8/5/2011 10, 8/5/2011 9,6 8/6/2011 9,2	1,123 11,	505 8/4	4/2011	11,123	11,505	Slk Wtr	10,897	Sand	568,180	84.0
8/5/2011 9,6 8/6/2011 9,2	0,655 11,	030 8/	5/2011	10,655	11,030	Slk Wtr	9,352	Sand	578,760	83.0
8/6/2011 9,2),173 10,	555 8/	5/2011	10,173	10,555	Slk Wtr	9,827	Sand	578,660	86.0
	,698 10,	080 8/	5/2011	9,698	10,080	Slk Wtr	9,717	Sand	571,400	84.0
0/0/0044 0	,223 9,6	05 8/6	6/2011	9,223	9,605	Slk Wtr	10,021	Sand	576,580	86.0
	,748 9,1	30 8/6	6/2011	8,748	9,130	Slk Wtr	10,191	Sand	571,140	85.0
8/7/2011 8,2	,273 8,6	555 8/	7/2011	8,273	8,655	Slk Wtr	10,904	Sand	571,580	82.0
8/7/2011 7,7	,798 8,1	80 8/	7/2011	7,798	8,180	Slk Wtr	9,656	Sand	573,340	86.0
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WR-35 Rev (9-11)

State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	1-30-2012	
API#:	47-069-00071	

Farm name: Brian Dytko		Oper	Operator Well No.: 8H (832975)			
LOCATION: Elevation: 1245		Quad	Quadrangle: Valley Grove WV			
District: Triadelphia		Coun	nty: Ohio			
Latitude: 6900'	Feet South of 40	Deg. 02	Min. 30	Sec.		
Longitude 4270'	Feet West of 80	Deg. 35	Min. 00	Sec.		

Chesapeake Appalachia, L.L.C. Company: Casing & Used in Left in well Cement fill P.O. Box 18496 Address: Tubing drilling up Cu. Ft. Oklahoma City, OK 73154-0496 20" 100' 100" Driven Eric Gillespie Agent: 13 3/8" 684' 684' 743 cf Inspector: Bill Hendershot 9 5/8" 2151' 21511 958 cf 5.1/2" 13989' Date Permit Issued: 1-6-2011 13989' 3577 cf 3-16-2011 Date Well Work Commenced: 11-22-2011 Date Well Work Completed: Verbal Plugging: Date Permission granted on: Rotary 🔽 Cable Rig Total Vertical Depth (ft): 6,428' Total Measured Depth (ft): 14,000' Fresh Water Depth (ft.): Salt Water Depth (ft.): 1000' Is coal being mined in area (N/Y)? Coal Depths (ft.): 632'

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet) Producing formation Marcellus Pay zone depth (ft) 6,817'-13,849' Gas: Initial open flow 0 MCF/d Oil: Initial open flow Final open flow MCF/d Final open flow _____ Bbl/d Time of open flow between initial and final tests Hours Static rock Pressure 4178 psig (surface pressure) after Hours Second producing formation Pay zone depth (ft) Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d Final open flow ____ Final open flow MCF/d Bbl/d Time of open flow between initial and final tests Static rock Pressure ____psig (surface pressure) after _____Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlane Williams
Signature

Void(s) encountered (N/Y) Depth(s) N

3-29-2012 Date

Were core samples taken? Yes No N	Were cuttings caught during drilling? Yes Y
Were Electrical, Mechanical or Geophysical logs recorded on to open hole logs run from 0-6402' MD; LWD GR from 5485-14000' MD.	this well? If yes, please list GR, neutron, density, and resistivity
FRACTURING OR STIMULATING, PHYSICAL CHAN	OWING: 1). DETAILS OF PERFORATED INTERVALS IGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIO S AND BOTTOMS OF ALL FORMATIONS, INCLUDING SURFACE TO TOTAL DEPTH.
Perforated Intervals, Fracturing, or Stimulating:	
(See Attached)	
Plug Back Details Including Plug Type and Depth(s): Ceme	nt @ 13,895'
Formations Encountered: Top D Surface:	Depth / Bottom Depth
(See Attached)	
	·
	·

	T	
Formation/Lithology	Top Depth (ft)	Bottom Depth (ft)
SS/LS	0	520
LS/SS	520	632
Pittsburg Coal	632	637
LS/SS	637	680
SS/SHALE	680	900
Big Lime	900	1110
Big Injun	1110	1300
SHALE	1300	2950
SHALE/LS	2950	3100
SHALE	3100	6220
Geneseo	6220	6250
Tully	6250	6450
Hamilton	6450	6603
Marcellus	6603	14000

PERFORATION RECORD ATTACHMENT

Well Name and Number: Brian Dytko 8H (832975)

Date From the property of the property	terval Perforated rom To 3,467 13,849 2,992 13,374 2,517 12,894 2,042 12,424 1,570 11,949 1,092 11,472 0,617 10,999 0,138 10,524 1,667 10,049 1,192 9,574	Date 11/14/2011 11/15/2011 11/15/2011 11/16/2011 11/16/2011 11/16/2011 11/17/2011 11/18/2011 11/19/2011	Interval 13,467 12,992 12,517 12,042 11,570 11,092 10,617 10,138	Treated 13,849 13,374 12,894 12,424 11,949 11,472 10,999	Type Sik Wtr Sik Wtr Sik Wtr Sik Wtr Sik Wtr Sik Wtr	uid Amount 9,370 9,849 10,469 9,930 9,729 11,628	Type Sand Sand Sand Sand Sand Sand	Amount 570,286 572,330 571,037 570,518 569,527	Average Injection 86 85 85 87
11/14/2011 13, 11/15/2011 12, 11/15/2011 12, 11/16/2011 12, 11/16/2011 11, 11/16/2011 11, 11/17/2011 10, 11/18/2011 10, 11/19/2011 9,6	3,467 13,849 2,992 13,374 2,517 12,894 2,042 12,424 1,570 11,949 1,092 11,472 0,617 10,999 0,138 10,524 0,667 10,049 1,192 9,574	11/14/2011 11/15/2011 11/15/2011 11/16/2011 11/16/2011 11/16/2011 11/17/2011 11/18/2011	13,467 12,992 12,517 12,042 11,570 11,092 10,617	13,849 13,374 12,894 12,424 11,949 11,472	Slk Wtr Slk Wtr Slk Wtr Slk Wtr Slk Wtr Slk Wtr	9,370 9,849 10,469 9,930 9,729	Type Sand Sand Sand Sand Sand Sand	Amount 570,286 572,330 571,037 570,518 569,527	Injection 86 85 85 87
11/15/2011 12, 11/15/2011 12, 11/16/2011 12, 11/16/2011 11, 11/16/2011 11, 11/17/2011 10, 11/18/2011 10, 11/19/2011 9,6	2,992 13,374 2,517 12,894 2,042 12,424 1,570 11,949 1,092 11,472 0,617 10,999 0,138 10,524 1,667 10,049 1,192 9,574	11/15/2011 11/15/2011 11/16/2011 11/16/2011 11/16/2011 11/17/2011 11/18/2011	12,992 12,517 12,042 11,570 11,092 10,617	13,374 12,894 12,424 11,949 11,472	Slk Wtr Slk Wtr Slk Wtr Slk Wtr Slk Wtr Slk Wtr	9,849 10,469 9,930 9,729	Sand Sand Sand Sand Sand	570,286 572,330 571,037 570,518 569,527	86 85 85 87
11/15/2011 12, 11/16/2011 12, 11/16/2011 11, 11/16/2011 11, 11/17/2011 10, 11/18/2011 10, 11/19/2011 9,6	2,517 12,894 2,042 12,424 1,570 11,949 1,092 11,472 0,617 10,999 0,138 10,524 0,667 10,049 1,192 9,574	11/15/2011 11/16/2011 11/16/2011 11/16/2011 11/17/2011 11/18/2011	12,517 12,042 11,570 11,092 10,617	12,894 12,424 11,949 11,472	Slk Wtr Slk Wtr Slk Wtr Slk Wtr	10,469 9,930 9,729	Sand Sand Sand	571,037 570,518 569,527	85 87
11/16/2011 12, 11/16/2011 11, 11/16/2011 11, 11/17/2011 10, 11/18/2011 10, 11/19/2011 9,6	2,042 12,424 1,570 11,949 1,092 11,472 0,617 10,999 0,138 10,524 0,667 10,049 1,192 9,574	11/16/2011 11/16/2011 11/16/2011 11/17/2011 11/18/2011	12,042 11,570 11,092 10,617	12,424 11,949 11,472	Sik Wtr Sik Wtr Sik Wtr	9,930 9,729	Sand Sand	571,037 570,518 569,527	85 87
11/16/2011 11, 11/16/2011 11, 11/17/2011 10, 11/18/2011 10, 11/19/2011 9,6	1,570 11,949 1,092 11,472 0,617 10,999 0,138 10,524 0,667 10,049 1,192 9,574	11/16/2011 11/16/2011 11/17/2011 11/18/2011	11,570 11,092 10,617	11,949 11,472	Sik Wtr Sik Wtr	9,729	Sand	569,527	
11/16/2011 11, 11/17/2011 10, 11/18/2011 10, 11/19/2011 9,6	1,092 11,472 0,617 10,999 0,138 10,524 0,667 10,049 0,192 9,574	11/16/2011 11/17/2011 11/18/2011	11,092 10,617	11,472	Slk Wtr		Sand	· · · · · · · · · · · · · · · · · · ·	ΩQ
11/17/2011 10, 11/18/2011 10, 11/19/2011 9,6	0,617 10,999 0,138 10,524 ,667 10,049 ,192 9,574	11/17/2011	10,617			11 628			00
11/18/2011 10, 11/19/2011 9,6	0,138 10,524 ,667 10,049 ,192 9,574	11/18/2011		10,999		11,020	Sand	569,820	75
11/19/2011 9,6	,667 10,049 ,192 9,574		10.138		Slk Wtr	9,882	Sand	568,728	86
	,192 9,574	11/19/2011	-,	10,524	Slk Wtr	11,344	Sand	576,475	85
11/19/2011 9,1			9,667	10,049	Slk Wtr	10,768	Sand	570,048	85
		11/19/2011	9,192	9,574	Slk Wtr	9,934	Sand	571,539	83
11/19/2011 8,7	,717 9,099	11/19/2011	8,717	9,099	Slk Wtr	10,182	Sand	572,610	85
11/20/2011 8,2	,242 8,624	11/20/2011	8,242	8,624	Slk Wtr	9,460	Sand	570,741	85
11/20/2011 7,7	,767 8,149	11/20/2011	7,767	8,149	Slk Wtr	10,314	Sand	571,955	85
	,292 7,674	11/21/2011	7,292	7,674	Slk Wtr	9,553	Sand	572,137	84
11/21/2011 6,8	,817 7,199	11/21/2011	6,817	7,199	Slk Wtr	9,224	Sand	549,715	87
								·	
				L					
					·				

State of West Virginia Department of Environmental Protection Office of Oil and Gas

DATE: 7/23

Farm name: Jenkins, Mary Joan			<u>er 1-08</u>		
LOCATION: Elevation: 1962	_ Quadrangle: _	Cuzza	<u> Let</u>	 	
District: Pleasant		Preston			
Latitude: 5110 Feet South of 39 Deg. Longitude 8620 Feet West of 39 Deg					
Doughado of San Tool West of 3 1 Deg	· was some IVIIII	. <u> </u>	.		
Company: Novus Operating, LCC					
	Casing &	Used in	Left in well	Cement fill	
Address: 2963 Ruger Drive Royse City, 1x 75189	Tubing	drilling		up Cu. Ft.	
	<u> </u>	50'	50'	Driven	
Agent: Charles B. Pollison	Conductor				
Inspector: Bill Hatfield	- 1 10	A			
Date Permit Issued: 11/13/2008	13 -3/811	229'	218'	CTS	
Date Well Work Commenced: 1/29/2009	R# 2-22				
Date Well Work Completed: 3/15/2010					
Verbal Plugging: N/A	9-5/8"	S4841	24821	CTS	
Date Permission granted on: N/A	38# I-55			725 sx	
Rotary Kable Rig					
Total Vertical Depth (ft): 8051.93	7"	8300,	82981	650 sv	
	26# HCPILO			819-5+3	
Total Measured Depth (ft): 8 4301 Fresh Water Depth (ft.): 185	K Window	cut 708	4-7092'		
Salt Water Depth (ft.): 1700					
Is coal being mined in area (N/Y)? N	4-1/2" tines	15941	1594'	131 sx	
Coal Depths (ft.): 85, 149, 200, 345, +400					
Void(s) encountered (N/Y) Depth(s)	Liner top		I classe at	8430	
			,		
OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)					
Producing formation N/A Pay zone depth (ft) O Gas: Initial open flow O MCF/d Oil: Initial open flow O Bbl/d					
Final open flow O MCF/d Final open flow O Bbl/d					
Time of open flow between initial and final tests Hours					
Gas: Initial open flow					
Second producing formation N/A Pay zone depth (ft)					
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d					
Final open flow O MCF/d Final open flow O Bbl/d					
Time of open flow between initial and final tests Hours					
Static rock Pressure					
I certify under penalty of law that I have personally examined	and am familiar	with the inform			
recently under penancy of law that I have personally examined	and am familiai	with the miori	ation submitted	on this document an	

Were core samples taken? Yes V No_	Were cuttings c	aught during drilling? YesNo
Were Electrical, Mechanical or Geophysical lo	gs recorded on this well? If yes, plea	ase list GAJPEX/AIT/FMT
FRACTURING OR STIMULATING, PHY	SICAL CHANGE, ETC. 2). THE OF THE TOPS AND BOTTOMS	AILS OF PERFORATED INTERVALS, WELL LOG WHICH IS A SYSTEMATIC S OF ALL FORMATIONS, INCLUDING TAL DEPTH.
Perforated Intervals, Fracturing, or Stimulating	76 94	
No and the	1. 1. 1. 1. 1.	Continu
No perferated intervalence	n. Waiting on pipeli	ne for completion.
Plug Back Details Including Plug Type and De	nth(s):	The facility of the control of
1 tog Dack Downs including 1 tog 1 ype and De	pth(s): Mill Window	1084 - 4012
Formations Encountered: Surface:	Top Depth /	Bottom Depth
BWKCT SHALE	7645	77,5
Tuny him	7715	7745
HAMILAGUSHALE	7745	ಕಿಂತ್ರು
M ARCELLES	<u> </u>	ద్రా క
00000000	විදියා	
A		
		Ta.

State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE: 7/23/2012 API#: 47-77-00443 F

·							
Farm name: Forman, Karen L.	Operator Well	No.: Fight	ing Farme	r ZH			
LOCATION: Elevation: 1787	_ Quadrangle: _	Quadrangle: Cuzzart					
District: Portland	County:						
Latitude: 44,450 Feet South of 79 Deg	. 3 5 Min.		ec.				
Longitude 8430 Feet West of 39 Deg	. 35 Min.	. <u>00</u> Se	ec.				
Company: Novus Operating, LLC	Ta : 0	T * 7 1 ?	T C : 11				
Address: 2963 Ruger Drive	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.			
Royse City, TX 75189	20" conduder	40'	40'	Diven			
Agent: Charles B. Dollison							
Inspector: Bill Hatfield	13-3/8"	414'	414,	CTS			
Date Permit Issued: 11/13/2008	36# H4D						
Date Well Work Commenced: 2/17/2009							
Date Well Work Completed: 2/24/2010	9-5/8"	2739'	27391	CTS			
Verbal Plugging: N/A							
Date Permission granted on: N/A	5-1/2"	10,011	10,011	1280843			
Rotary X Cable Rig	17# HCPILD						
Total Vertical Depth (ft): 7885.621							
Total Measured Depth (ft): 10,055	casing Patel		8440'-				
Fresh Water Depth (ft.): 300	ID= 4.592	03	8 460'				
Salt Water Depth (ft.): 1 700							
Is coal being mined in area (N/Y)?							
Coal Depths (ft.): 85, 149, 200, 345, 4400	1						
Void(s) encountered (N/Y) Depth(s) N/A							
			I				
OPEN FLOW DATA (If more than two producing formati				heet)			
Producing formation Lower Morcellus Pay Gas: Initial open flow O MCF/d Oil: Initial open flow			YSS MD				
Final open flow 300 MCF/d Final open flo							
Time of open flow between initial and final tests 3				Section 20			
Static rock Pressure 3150 psig (surface pressure) a							
	a			2.25 °			
Second producing formation N/A Pay zo Gas: Initial open flow MCF/d Oil: Initial open flow	one depth (ft) C	<u>/</u> ol/d					
Final open flow O MCF/d Final open flow				MIII - Section of the			
Time of open flow between initial and final tests	O Hours	-					
Static rock Pressure O psig (surface pressure) a	fter 🙋 Hour	s					
I certify under penalty of law that I have personally examined	and am familiar	with the infor	mation submitted	on this document and			
all the attachments and that, based on my inquiry of those indi							
that the information is true, accurate, and complete.							
Matthet	<u>.</u>	7	/23/2012.				
Signature			Date				

Were core samples taken? Yes	No	Were cuttir	ngs caught during	g drilling? Yes	No
Were Electrical, Mechanical or Geop	hysical logs recorde	d on this well? If yes,	please list	<u> </u>	
NOTE: IN THE AREA BELO FRACTURING OR STIMULATI DETAILED GEOLOGICAL RE COAL ENCOUNTERED BY THE	NG, PHYSICAL C	HANGE, ETC. 2). I TOPS AND BOTTO	THE WELL LO DMS OF ALL	G WHICH IS A SY FORMATIONS, 1	STEMATIC
Perforated Intervals, Fracturing, or S	timulating:				
9733' - 9955'	13, 169 BBL	239,37516	s looneth	1805421Ps	4470
9441' - 9663'	12,201 886	246,669165	loomesh	180446 185	
6058, - 8581,		390,681165			
8679' - 8949'	Stimulation	data lost, ap	y roxinately	same as a	rpare
Plug Back Details Including Plug Ty	pe and Depth(s):			· · · · · · · · · · · · · · · · · · ·	
					<u></u>
Formations Encountered: Surface:	***	Гор Depth		Bottom I	<u>)epth</u>
Burkers & HALE	0	7490		760	٥
Turn line store	0	7410		763	
HAMILTON SHALF	Q	7436		793	
Markey	<u> </u>	7930		රිග	5
ONODAGA	3C W				
					·
· · · · · · · · · · · · · · · · · · ·					
	- <u>,</u>				

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State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE: 7/23/2012 API#: 47-77-00444

CATION: Elevation: 1885	Quadrangle:	Cuzza	· +	
District: Pleasant	County: P	reston		•
Latitude: 6640 Feet South of 79 Deg.	<u>35</u> Min.	OO Sec		
Longitude 3460 Feet West of 39 Deg.	35 Min.	OD Sec	.	
Company: Novus Operating, LLC				
Address: 2963 Ruger Dive	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Royse C: Ly. TX 75/89	20" condud	56.35'	56.35'	Driven
Agent: Charles B. Dollison				
Inspector: Bill Haffield	13-3/8"	402.8'	402.8'	350 SX
Date Permit Issued: 1/12/2009	48# H40			
Date Well Work Commenced: 6/17/2009 ~				
Date Well Work Completed: 5/25/2010 /	9-5/8"	2712.5'	2712.5	875 sx
Verbal Plugging: N/A	36#K55			
Date Permission granted on: N/A				
Rotary . Cable . Rig .	5-1/2 18	8817'	8814'	7085x
Total Vertical Depth (ft): Vertical *	17# P110			1263 ft ³
Total Measured Depth (ft): 2790				
Fresh Water Depth (ft.): 300	2-3/8"		8627.92'	
Salt Water Depth (ft.): 1700	N 80			
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 85, 149, 200, 345, +400				
Void(s) encountered (N/Y) Depth(s) N/A				
Static rock Pressure 2245 _psig (surface pressure) aft	one depth (ft) ow 0 Bbb O Bbb O Hours er 117 Hours	8715 1/d	ita on separate sh Directional Straighter Smal survivajection.	,
Gas: Initial open flow O MCF/d Oil: Initial open flow Final open flow MCF/d Final open flow	ow O Bbl		rejection.	NL 2 & Williams

	Were cuttings caugh	nt during drilling? Yes 📈 No
ere Electrical, Mechanical or Geophysical logs	recorded on this well? If yes, please li	st GRECOLITY/CM3
OTE: IN THE AREA BELOW PUT T RACTURING OR STIMULATING, PHYSI DETAILED GEOLOGICAL RECORD OF COAL ENCOUNTERED BY THE WELLBO	ICAL CHANGE, ETC. 2). THE WE THE TOPS AND BOTTOMS OF	LL LOG WHICH IS A SYSTEMA F ALL FORMATIONS, INCLUD
erforated Intervals, Fracturing, or Stimulating:		
Interval 1 8715-8	735 Interval Z	8658-8694-
8715-8694-Universal A	cid Job - 4000 gal @	5.3 bpm @ 7070 ps;
8715 - 8694 - Universal Fr	ac Job - 10, 267 bbl cle	an © 89.8 bpm ©
7069 psi, 233,000 lbs		
u ø •		
ug Back Details Including Plug Type and Depti	b(s):	
ormations Encountered: urface:	Top Depth /	Bottom Depth
	Top Depth /	Bottom Depth ラミュ と
urface:		
urface:	فادي	ర ీ2ఎ <u>స</u>
Switch SHACE	<u>පි\දුය</u> ව්20ණ	<u> </u>
Hamilton SHALE Hamilton SHALE	8120 8208 8242	8202 8242 8450
Hamilton SHALE MARCELLES OHALE	8120 8203 8242 8450	825 8242 845
Hamilton SHALE MARCELLES OHALE	8120 8203 8242 8450	8202 8242 8450
Hamilton SHALE MARCELLES OHALE	8120 8203 8242 8450	8202 8242 8450
Hamilton SHALE MARCELLES OHALE	8120 8203 8242 8450	8202 8242 8450
Hame TON SHALE MARCELLES THALE	8120 8203 8242 8450	స్ట్రెట్ 8292 8656
Hame TON SHALE MARCELLES THALE	8120 8203 8242 8450	8202 8242 8450
Hame TON SHALE MARCELLES THALE	8120 8203 8242 8450	స్ట్రెట్ 8292 8656
Hame TON SHALE MARCELLES THALE	8120 8203 8242 8450	8208 8242 8450
Hame TON SHALE MARCELLES THALE	8120 8203 8242 8450	8208 8242 8450

DATE: 8/23/2010 API#: 4707700461

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Well Operator's Report of Wall Work

Farm name:	****	LANCC		_Operator Well	No.:	3	
LOCATION	: Elevation:		1774	Quadrangle:	***************************************	BRANDONVIL	LE
	District:	G.	RANT	County:		DESCROSI	
	Latitude:	12,140	Feet South of	39 Deg.	45 Mir	PRESTON L 0 Sec.	
	Longitude:	10,260	Feet West of	79 Deg.			
Сотралу:	Texas Keysinne,		October 1		7/2 14837	. 0 586.	
	······································			Casing &	Used in	Left in well	Cement fill up
Address;	560 Epsilon Driv	*E		Tubing	drilling	TARIL III M CH	1 11
	Pittsburgh, PA 1	5238		1 10 116	FOR HYSTER		Cu. Ft.
	Jon Farmer		· · · · · · · · · · · · · · · · · · ·	13 3/8"	42	. 479	
	Bryan Harris			10010	. 42	42	Sanded in
Date Permi		03/1	6/09	9 5/8"	378		
Date Well V	Vork Commence	d- 06/2	4/10) 7 J G	3/0	378	140
Date Well V	Vork Completed	. 06/3	9/10	7715	1		
Verbal Plug	vine:	* 907	85 (.0.		1307	1307	175
	sion granted on	***************************************	*****	4 1/4"		1	
		Rig]		49 72	00	3975	120
Total Verri	al Depth (ft.):	4008			<u></u>	<u></u>	<u> </u>
Total Meas	arad	4028					
Frech Wate	r Depth (ft.):		568 100 MAG		<u> </u>	-	<u> </u>
Salt Water	Depth (ft.):	oone repor	200, 420, 760 4-3			<u> </u>	
le coul hain	g mined in the a	TORIGINATION OF THE PROPERTY O	150 ? N			-	
Coal Depth		none reper			1	·	
	Nintered (N/Y)	Jamihich	303		1	 	ļ
	Producing forms	ion:	we producing form	ations please in	tlude additions Pay zone Dep		te sneet) 3883 - 3889
	Gas: Initial open	flow:	G/S TSIM	15/e/41, 16/e/1/44 to	MCF/D Oils	initial open flov	% 0 Bbl/d
	Final open flow	_	1463		MCF/D Oil:	Final open flow	0 Bbl/d
	Time of open fle	w between	initial and final te	sts: N/A	Ноша	· mar that are a	
:	Static rock Press		1200		psig(surface p	ressure) after	264 Hours
:	Second Producin	g formstid	e: Balhowe B		Pay zone Dep	6.7 6 3	3041 - 3104
	Gas: Initial open	flore:	Co-mingled		MCE/D Oil-	Initial open floy	v: 0 Bbl/d
	Final open flow		Co-mingled		MCF/D OIL	Final open flow	: 0 Bbl/d
		w between	initial and final te	sta: N/A	Hours	s mair allege well	· C DODG
	Static rock Press		Co-mingled		psig(surface r	स्वतीक रंडमाण्डक्य	+ Hours
document a	ad all the attach	monts and	eve personally examinate that bases on rethe information is	ny inquiry_of i	imiliar with thise individu	se information s	ubmitted on this responsible for
			~eignatur	* /		Date	

MECHIVED Office of Chi & Gus

SEP 0 5 2012

WW Department of Environmental Protection

Wore:	ore sam	ples taken?	No_ <u>X</u>	Were cuttings caught	durin, 'Ting?	Yes	No X
Were	N/N	Electrical,	N Mechanical	Y or Geophysica Y/N	i logs recorded (m this well?	

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: I). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE. ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS. INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL

Perforated Intervals, Fracturing, or Stimulating:

Perfed 3rd Riley 3883' - 3389' (18 shots). BD 2974 #. 350 sks 20/40. 658 bbl. Gel Frac.	
Perfed Ballrown B 3041' - 3104' (55 shots). BD @ 1900 #, 430 sks 20/40, 890 bbl. Gel Frac.	_
Perfed Speechley A 2766' - 2809' (28 shots). BD 2700 #. 250 sks 20/40. 470 bbl. Gel Frac.	_
200 - 10 - 7 V Ets (32)	
Track the state of	

Formations Essecuntered:	Top Depth	Bettern Dapili	Moles:
PILE			
SHALE	ð	22	
SANDSTONE	22	30	
SANDY SHALE	30	40	
SANDSTONE	48	175	1" FW € 170
SANDY SHALE	175	230	37 FW @ 225
SAMOSTONE	230	400	Fre & Mar
SANDY SHALE	420	470	DAMP FW @ 420
SANDSTONE	470	570	
	570	690	
REDROCK SHALE	690	715	
SANDY SHALE	713	721 -	
LITTLE LIME	731	746	•
PENCIL CAVE SHALE	746	755	
BIG LIME	755	909	1時" 570 @ 780
BIG INTUN SANDSTONE	909	1105	TOP
SANDY SHALE	1163	1226	
WEIR SANDSTONE	1226	1272	
SANDY SHALE	1272	1330	
BEREA SANDSTONE	1330	1374	
SHALE	1374	1393	
GANTZ SANDSTONE	1393	1446	
randy shale	1446	1967	
upper 4th Sand	1967	2000	
sandy shale	2000	2151	
SHALE	2151	2193	•
Bayard sandstone	2195	22,59	
Shale	2259	2275	
BAVARD E SANDSTONE	2275	2529	
Shale	2329	2400	
BANDY SHALE	2400	2783	
SPEECHLEY A SANDSTONE	2763	2810	
SANDY SHALE	2810	3007	
Balltown B sancetone	3007	3108	
SHALE	7)08		CAS SHOW @0150 TSTM
BALLTOWN C SANDSTONE	3120	3420	
Skale	\$147	3147	
SANDY SHALE	3250	3250 3477	
SHALE	347? 347?	3477	
Sandy Shale	343, 3620	3620	
ORD RILEY SILISTONE	2024 3869	3869	
SANDY SHALE	3902	3902	CAS SHOW (@ 3890) TSTM
***	\$35E4	4028	TD



SEP 05 COR

Additional Pay Information

Taird Producing formation	on: Speechley A	 Pay zone	Depth (ft)	27	66 - 28	09
Gas: Initial open flow:	Co-mingled	MCF/D	Oil: Initial open	flow:	0	Bbi/d
Final open flow	Co-mingled	 MCF/D	Oil: Final open f	dow:	0	BbI/d
Time of open flow hereon	en initial and final tests:	 Hours	*			-
Static rock Pressure:	Co-mingled	 paig(suri	ace pressure) afte	at .		Hours

State of Wast Virginia Department of Environmental Protection Office of Oil and Gas

Well Operator's Report of Well Work

Parin name:	ří	ALL, WILLI	AM	Operator Well	No.:	4.	and the second s
LOCATION	Elevation:		1749	_Quadrangle;	-	BRANDONVIL	LE
	District:	GR	ANT	County:		PRESTON	
	Latitude:	12,280	Foot South of	39 Deg.	45 M	m. O Sec.	WHITE SHIP WAS A
	Longhude:		Foot Wast of	79 Deg.		in. 0 Sec.	
Company:	Texas Keystons	, Inc.					
a darrece.	560 Epsilon Dri			Casing & Tubing	Used in drilling	Left in well	Cement fill up
4.00	Pitisburgh, PA		**************************************	a monng	numa		Cu. Ft.
Agent:	Jon Farmer	1.12.370		1.3 3/8°	42		0.112
	Bryen Harris			1.5 3/6"	4.2	42	Sanded In
Date Permi		01/11	łΛ	0 2/00	270	200	1.10
Date Wall 3	Vork Commen		H-200-00-04-04-0-0-0-1-0-0-0-0-0-0-0-0-0-0-	9 5/8"	379	379	140
	Vork Complete		Carried & Community Community in Community Com	717	7000	1500	1.50
Verbal Plu		ur 07/00	/10		1223	1223	170
	eguig: ssion granted o	17. d		4 1/2"		**************************************	4.0
	X Cable	**************************************		4 %	0	3178	08
		Rig					
Total Meas	cal Depth (ft.);		······································	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.	3040	0
	urec er Depth (ft.):	3927	A NEA AMA			erat.	
	Depth (ft.):		0, 910, 970		***************************************	·····	
		none report		 	ļ		
Coal Depth	g mined in the		Annual Control of the State of the Control of the State o	 			
	ountered (N/Y)	none report	ea N				-
OPEN FLO	Producing form Gas: initial ope Final open flow	ation: n flow:	Belltown C 3/S TSTM 80		Pay zone Do MCF/D O MCF/D O	nal date on separa epth (fi) it: Initial open flov it: Final open flov	3051 - 3061 wt 0. BbVd
	Time of open fl Static rock Pres		initial and final to 067		_Hours _psig(surface	pressure) affer	192 Hours
	Second Produc	isa Gamada	7.		Pay zone D	ands 144	
	Gas: Initial ope					spor(ii) il: Initial open fic	w: Bbl/d
	Final open flow				_word o	ii: Rinal open flov	v: BbVd
		-	initial and final to		_Steene O Hours	ni kami o pan ana	;. "2024
	Static rock Pres		month that then to			pressure) after	Hours
document	and all the atta	chments and		my inquiry of	those indivi-	the information : Juals immediately	
			Signatu	real party of the same of the		Date	
	<i>L</i>	~				age kom af	

PECENTIA Office of CH & Gus

SEP 0 5 2012

Were core samples taken?	No_X Were o	uniags caught durit	illing? Yes	No X	
Were N Electrical N Y/N Y/N	Y/N	ol megdifaren 1982 1990	arded on this well?		
NOTE: IN THE AREA BELOW	PITT THE FOLLOWS	NG IS DIPENTS OF	BEBSKNA - PER TRUPT	DVFA T CI	
FRACTURING OR STIMULAT	TING, PHYSICAL CHA	INGE, ETC. 2). THE V	WELL LOG WHICH IS	rvalo, A	
SYSTEMATIC DETAILED GE	OLOGICAL RECORD	OF THE TOPS AND	BOTTOMS OF ALL		
FORMATIONS, INCLUDING	COAL ENCOUNTERE	D BY THE WELLBOI	re from surface t	TO TOTAL	
Performed Intervals, Fracturing, or	Stimuleting:				
The Add To New Control on the Control	10 1 2 1200 1 1200 1				
Perfed Balliown C 3051' - 3061' (3	10 shots). BD 2874 #. 50	00 sks 20/40. 770 bbl. 0	rel Frac		
	- 1.25xx	7553.: 63			
	······································		**************************************		
		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		·······	
The second secon	*****				
			The well-stated principals (), and a	MONTH TO A CONTROL OF THE AMERICAN ASSESSMENT OF THE ASSESSMENT OF	
Formulaions Encountreed:	Top Dejuh	Buttom Depth	Netas:		
FILL,	0	. 11			
SANDSTONE	17	19 25			
SHALE	25	35			
SANDYSHALE	35	44 190	r had state with dies		
SANDSTONE	299	590	1/2" FW @ 55' 1/2" FW @ 510'		
	590	597	WE 1 to \$2.00		
REDROCK SHALE		***			
REDROCK SHALE	597	609			
	797 809	609 627			
LITTLE LIME					
LITTLE LIME FHNOR CAVE SHALE	608	<b>527</b>	DAMF FW (Ø \$20'		
LITTLE LIME PENCE. CAVE SHALE BIG LIMS	609 637	\$19.	DAMF FW @ \$20' 1/4" FW @ 910'		
LITTLE LIME PENCEL CAVE SHALE BIG LIME BIG INUN SANISTONE SHALE WEER SANISTONE	609 637 779	637 719 827	_		
LITTLE LIME PENCEL CAVE SHALE BIG LIME BIG INUN SANISTONE SHALE WEER SANISTONE SHALE	609 637 779 897	537 779 807 1072	1/4" FN' (\$:910		
LITTLE LIME PENCEL CAVE SHALE BIG LIME BIG INFUN SANDSTONE SHALE WEIR SANDSTONE SHALE BEREA SANDSTONE	608 637 779 897 1072	537 779 897 1072 1131	1/4" FN' (\$:910		
LITTLE LIME PENCEL CAVE SHALE BIG LIME BIG INUN SANISTONE SHALE WEER SANISTONE SHALE	609 657 779 897 1072	637 719 807 1072 1131 1198	1/4" FN' (\$:910		
LITTLE LIME  PENCIL CAVE SHALE  BIG LIME  BIG INTUN SANDSTONE  SHALE  WEER SANDSTONE  SHALE  BEREA SANDSTONE  SHALE  GANTZ SANSTONE	609 657 779 897 1072 1531	637 719 897 J672 1131 1198 1245	1/4" FN' (\$:910		
LITTLE LIME PENCEL CAVE SHALE BIG LIME BIG INUN SANISTONE SHALE WEER SANOSTONE SHALE ERRES SANDSTONE SHALE GANTZ SANSTONE SANDSTONE SANDSTONE	609 657 779 897 1072 1531 1198 1245	637 719 897 1672 1131 1198 1265 1277	1/4" FN' (\$:910		
LITTLE LIME PENCIL CAVE SHALE BIG LIME BIG LIME BIG INUN SANDSTONE SHALE WER SANDSTONE SHALE ERREA SANDSTONE SHALE GANTZ SANSTONE SANDY SHALE UPPER ATH SAND	609 657 779 897 1072 1131 1198 1245	637 779 897 1672 1131 1198 1265 1277	1/4" FN' (\$:910		
LITTLE LIME PENCIL CAVE SHALE BIG LIMB BIG INJUN SANDSTONE SHALE WER SANDSTONE SHALE BEREA SANDSTONE SHALE GANTZ SANSTONE SANDY SHALE UPPER ATH SAND SANDY SHALE	609 657 779 897 1072 1131 1198 1245 1277	637 779 897 1672 1131 1198 1266 1277 1322 1823	1/4" FN' (\$:910		
LITTLE LIME PENCIL CAVE SHALE BIG LIMB BIG INJUN SANDSTONE SHALE WER SANDSTONE SHALE BEREA SANDSTONE SHALE GANTZ SANSTONE SANDY SHALE LIPPER ATR SAND SANDY SHALE BAYARD SANDSTONE	608 637 779 897 1072 1131 1198 1245 1277 1322 1821 1822	637 719 827 1072 1131 1198 1245 1277 1322 1823 1446 2016 215D	1/4" FN' (\$:910		
LITTLE LIME PENCIL CAVE SHALE BIG LIMB BIG LIMB BIG INJUN SANDSTONE SHALE WER SANDSTONE SHALE BEREA SANDSTONE SHALE GANTZ SANSTONE SANDY SHALE LIPPER ATH SAND SANDY SHALE BAYARD SANDSTONE SHALE	608 657 779 897 1072 1131 1198 1245 1277 1322 1822 1822 1868 2076	637 779 897 1672 1131 1198 1265 1277 1322 1823 1868 2076 2150	1/4" FN' (\$:910		
LITTLE LIME PENCIL CAVE SHALE BIG LIME BIG LIME BIG INUN SANDSTONE SHALE WER SANDSTONE SHALE BEREA SANDSTONE SHALE GANTZ SANSTONE SANDY SHALE LIPPER ATH SAND SANDY SHALE BAYARD SANDSTONE SHALE SANDSTONE	609 457 779 897 1072 1131 1198 1245 1277 1322 1822 1868 2076 2136 2262	637 779 897 1672 1131 1198 1245 1277 1322 1823 1868 2076 2130 2262	1/4" FN' (§: 910		
LITTLE LIME PENCIL CAVE SHALE BIG LIME BIG LIME BIG INUN SANDSTONE SHALE WER SANDSTONE SHALE BEREA SANDSTONE SHALE GANTZ SANSTONE SANDY SHALE LIPPER STR SAND SANDY SHALE BAYARD SANDSTONE SHALE SANDSTONE SHALE SANDSTONE	609 657 779 897 1072 1131 1198 1245 1277 1322 1822 1868 2876 2136 2262 2346	537 779 807 1072 1131 1198 1245 1277 1322 1823 1868 2076 2130 2262 2346 2568	1/4" FN' (§: 910		
LITTLE LIME PENCIL CAVE SHALE BIG LIMB BIG INUN SANDSTONE SHALE WEIR SANDSTONE SHALE BERBA SANDSTONE SHALE GANUX SANSTONE SANDY SHALE LUPPER ATH SAND SANDY SHALE BAYARD SANDSTONE SHALE SANDSTONE SHALE SANDSTONE SANDY SHALE SANDSTONE SANDY SHALE	609 657 779 897 1072 1131 1158 1245 1277 1322 1822 1822 1822 1868 2076 2136 2262 2346 2568	\$37 779 897 1072 1131 1198 1245 1277 1322 1825 1468 2076 2150 2262 2346 2568 2513	1/4" FN' (§: 910		
LITTLE LIME PENCEL CAVE SHALE BIG LIMB BIG INUN SANISTONE SHALE WER SANDSTONE SHALE ERREA SANDSTONE SHALE GANTZ SANSTONE SANDY SHALE UPPER ATH SAND SANDY SHALE BAYARD SANDSTONE SHALE SANDSTONE SHALE SANDSTONE SHALE SANDSTONE SANDY SHALE SPECHLEY A SANDSTONE SHALE SPECHLEY A SANDSTONE	608 637 779 897 1072 1131 1158 1245 1277 1322 1822 1822 1868 2076 2136 2262 2346 2568	537 779 897 1072 1131 1198 1245 1277 1322 1825 1868 2076 2150 2252 2246 2358 3513 2769	1/4" FN' (§: 910		
LITTLE LIME PENCEL CAVE SHALE BIG LIMB BIG INUN SANISTONE SHALE WER SANDSTONE SHALE ERREA SANDSTONE SHALE GANTZ SANSTONE SANDY SHALE UPPER ATH SAND SANDY SHALE BAYARD SANDSTONE SHALE SANDSTONE SHALE SANDSTONE SANDSTONE SHALE SPECCHLEY A SANDSTONE SHALE SANDY SHALE SPECCHLEY A SANDSTONE SHALE SANDY SHALE	608 637 779 897 1072 1131 1158 1245 1277 1322 1822 1822 1868 2076 2136 2262 2346 2346 2568 2613	537 779 897 1072 1131 1198 1265 1277 1322 1823 1868 2076 2150 2262 2346 2368 3313 2769 2917	16" PN & NO		
LITTLE LIME PENCIL CAVE SHALE BIG LIMB BIG LIMB BIG INUN SANDSTONE SHALE WER SANDSTONE SHALE ERREA SANDSTONE SHALE GANTZ SANSTONE SANDY SHALE UPPER ATH SAND SANDY SHALE BAYARD SANDSTONE SHALE SANDSTONE SANDY SHALE SANDSTONE	608 637 779 897 1072 1131 1158 1245 1277 1322 1822 1822 1822 2476 2136 2262 2346 2468 2612 2759 2917	\$37 779 827 1072 1131 1198 1265 1277 1322 1825 1466 2076 2150 2262 2346 2568 3513 2769 2917 3068	1/4" FN' (§: 910	"SIM	
LITTLE LIME PENCEL CAVE SHALE BIG LIMB BIG INUN SANISTONE SHALE WER SANDSTONE SHALE ERREA SANDSTONE SHALE GANTZ SANSTONE SANDY SHALE UPPER ATH SAND SANDY SHALE BAYARD SANDSTONE SHALE SANDSTONE SHALE SANDSTONE SANDSTONE SHALE SPECCHLEY A SANDSTONE SHALE SANDY SHALE SPECCHLEY A SANDSTONE SHALE SANDY SHALE	608 637 779 897 1072 1131 1158 1245 1277 1322 1822 1822 1868 2076 2136 2262 2346 2346 2568 2613	537 779 897 1072 1131 1198 1265 1277 1322 1823 1868 2076 2150 2262 2346 2368 3313 2769 2917	16" PN & NO	"SIM	

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# State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	1-31-2012	
API#:	47-077-00565	

Farm name: Delislow Hunting and Fishing	Operator We	ll No.: 3H (83277	77)	····
LOCATION: Elevation: 1709'	_ Quadrangle:	651-Valley Point		
District: Grant	County: Pres	ton		
Latitude: 9158' Feet South of 39 Deg.	40 Mir	n. 00 Sec	<del></del>	
Longitude 11619 Feet West of 79 Deg	. <u>42</u> Mir	1. 30 Sec	3.	
Company: Chesapeake Appalachia, L.L.C.				
Address: P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Oklahoma City, OK 73154-0496	20"	60'	60'	Driven
Agent: Eric Gillespie	13 3/8"	383'	383'	688 cf
Inspector: Bill Hendershot	9 5/8"	3405'	3405'	1476 cf
Date Permit Issued: 12/27/2010	5 1/2"	13670'	13670'	2571 cf
Date Well Work Commenced: 3/21/2011				
Date Well Work Completed: 10/26/2011				
Verbal Plugging:				
Date Permission granted on:				
Rotary Cable Rig				
Total Vertical Depth (ft): 7,841'				
Total Measured Depth (ft): 13,670'				
Fresh Water Depth (ft.): 300'				
Salt Water Depth (ft.): None				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): None			f.m.	
Void(s) encountered (N/Y) Depth(s) N			mon the second	
OPEN FLOW DATA (If more than two producing formation Producing formation Marcellus Pay Gas: Initial open flow 2,544 MCF/d Oil: Initial open formation MCF/d Final open flow MCF/d Final open flow MCF/d Final open flow	ons please inclu	ide additional da	ata on separate s	heet)
Gas: Initial open flow ^{2,544} MCF/d Oil: Initial open f	low B	bl/d/\\\	MAP 80 "	
Final open flowMCF/d Final open flow	wBt	ol/d Mary	Par. 1920	12
Time of open flow between initial and final tests	Hours			
Static rock Pressure 5,097 psig (surface pressure) at	tterHou	rs		Opt.
Second producing formation Pay zo	ne depth (ft)		YO.	
Gas: Initial open flow MCF/d Oil: Initial open f				-47)
Final open flow MCF/d Final open flow				
Time of open flow between initial and final tests				
pois (Sariate Pressure) at	1104.			

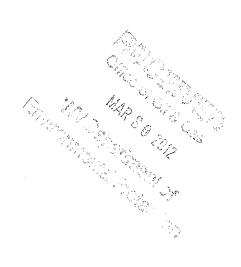
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlene Williams
Signature

<u>329-201</u>2 Date

Were core samples taken? Yes Y	_ No We	re cuttings caught du	ring drilling? Yes Y N	o
Were Electrical, Mechanical or Geophy open hole logs run from 0-7850' MD; LWD GR from 7	/sical logs recorded on this well?	If yes, please list G	R, neutron, density, and re	esistivity
NOTE: IN THE AREA BELOW FRACTURING OR STIMULATING DETAILED GEOLOGICAL RECO COAL ENCOUNTERED BY THE V	G, PHYSICAL CHANGE, ET ORD OF THE TOPS AND	C. 2). THE WELL I BOTTOMS OF A	LOG WHICH IS A SYSTI LL FORMATIONS, INC	EMATIC
Perforated Intervals, Fracturing, or Stin	nulating:			
(See Attached)				
			·	
Plug Back Details Including Plug Type	and Depth(s): Cement @ 1	3,578'		
Formations Encountered: Surface:	Top Depth	/	Bottom Depth	1
(See Attached)				
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Formation/Lithology	Top Depth (ft)	Bottom Depth (ft)
SS/SILT/SHALE	0	200
SS	200	800
SS/SHALE	800	850
LS/SS	850	950
SS	950	1430
Big Lime	1430	1570
Big Injun	1570	1750
SHALE/SS	1750	2000
SILT/SHALE	2000	3000
SS/SHALE	3000	3300
SILT	3300	3450
SS	3450	3550
SHALE/SILT	3550	7280
Geneseo	7280	7292
Tully	7292	7374
Hamilton	7374	7636
Marcellus	7636	13670



### PERFORATION RECORD ATTACHMENT

Well Name and Number: Dellslow Hunting and Fishing 3H (832777)

PERFOR	RATION RE	CORD	T		<del></del> .	STIMULAT	ION RECOR	D		<del></del> -
	Interval F	Perforated			<del></del>	Fi	luid	Proppir	ng Agent	Average
Date	From	To	Date	Interval	Treated	Туре	Amount	Туре	Amount	Injection
10/20/11	13,130	13,521	10/20/11	13,130	13,521	Slk Wtr	11,100	Sand	571,984	68
10/21/11	12,665	13,046	10/21/11	12,665	13,046	Slk Wtr	14,543	Sand	430,689	73
10/21/11	12,189	12,571	10/21/11	12,189	12,571	Slk Wtr	11,964	Sand	501,834	82
10/22/11	11,714	12,096	10/22/11	11,714	12,096	Slk Wtr	9,703	Sand	572,807	87
10/22/11	11,239	11,621	10/22/11	11,239	11,621	Slk Wtr	9,814	Sand	573,026	84
10/23/11	10,764	11,151	10/23/11	10,764	11,151	Slk Wtr	9,835	Sand	573,304	86
10/23/11	10,289	10,671	10/23/11	10,289	10,671	Slk Wtr	8,973	Sand	503,465	81
10/24/11	9,813	10,196	10/24/11	9,813	10,196	Sik Wtr	9,704	Sand	571,023	88
10/24/11	9,339	9,721	10/24/11	9,339	9,721	Slk Wtr	9,480	Sand	571,674	86
10/25/11	8,864	9,246	10/25/11	8,864	9,246	Slk Wtr	14,352	Sand	572,149	84
10/26/11	8,484	8,771	10/26/11	8,484	8,771	Slk Wtr	9,841	Sand	569,185	82
10/26/11	7,914	8,296	10/26/11	7,914	8,296	Slk Wtr	9,377	Sand	569,613	85
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# State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	1-31-2012
API#:	47-077-00571

District: Grant Latitude: 9171' Feet South of 39 Deg. 37 Longitude 6382' Feet West of 79 Deg. 42  Company: Chesapeake Appalachia, L.L.C.  Address: P.O. Box 18496 Oklahoma City, OK 73154-0496 Agent: Eric Gillespie 13 3/8 Inspector: Bill Hendershot 9 5/8	Deg. 42 Min. 30 Se  Casing & Used in drilling	Sec. Sec.  1 Left in well  2 100' 100' 115' 3415'	Cement fi up Cu. Ft. Driver 462 ct 1522 c 2585 c
Latitude: 9171' Feet South of 39 Deg. 37 Longitude 6382' Feet West of 79 Deg. 42  Company: Chesapeake Appalachia, L.L.C.  Address: P.O. Box 18496 Tubing Oklahoma City, OK 73154-0496 20"  Agent: Eric Gillespie 13 3/8 Inspector: Bill Hendershot 9 5/8  Date Permit Issued: 5/10/2011 5 1/2'  Date Well Work Commenced: 5/16/2011  Date Well Work Completed: 11/11/2011  Verbal Plugging: Date Permission granted on: Rotary ✓ Cable Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'	Deg. 37 Min. 30 Se Deg. 42 Min. 30 Se  Casing & Used in drilling 20" 100' 13 3/8" 412' 9 5/8" 3415'	Sec.  n	up Cu. Ft. Driver 462 cf
Company:  Chesapeake Appalachia, L.L.C.  Company:  Chesapeake Appalachia, L.L.C.  P.O. Box 18496  Oklahoma City, OK 73154-0496  Agent: Eric Gillespie  Inspector: Bill Hendershot  Date Permit Issued: 5/10/2011  Date Well Work Commenced: 5/16/2011  Date Well Work Completed: 11/11/2011  Verbal Plugging:  Date Permission granted on:  Rotary ✓ Cable Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'	Deg. 42 Min. 30 Se    Casing & Used in drilling   20" 100'   13 3/8" 412'   9 5/8" 3415'	Sec.  n	up Cu. Ft. Driver 462 cf
Company:  Chesapeake Appalachia, L.L.C.  Address:  P.O. Box 18496  Casing & Tubing  Oklahoma City, OK 73154-0496  Agent: Eric Gillespie  13 3/8  Inspector: Bill Hendershot  Date Permit Issued: 5/10/2011  Date Well Work Commenced: 5/16/2011  Date Well Work Completed: 11/11/2011  Verbal Plugging:  Date Permission granted on:  Rotary Cable Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'	Casing & Used in drilling 20" 100' 13 3/8" 412' 9 5/8" 3415'	n Left in well g 00' 100' 2' 412' 15' 3415'	up Cu. Ft. Driver 462 cf
Address: P.O. Box 18496  Casing & Tubing Oklahoma City, OK 73154-0496  Agent: Eric Gillespie 13 3/8 Inspector: Bill Hendershot 9 5/8  Date Permit Issued: 5/10/2011 5 1/2  Date Well Work Commenced: 5/16/2011 Date Well Work Completed: 11/11/2011  Verbal Plugging: Date Permission granted on: Rotary Cable Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'	Tubing drilling 20" 100' 13 3/8" 412' 9 5/8" 3415'	g 00' 100' 2' 412' 15' 3415'	up Cu. Ft. Driver 462 cf
Address: P.O. Box 18496  Oklahoma City, OK 73154-0496  Agent: Eric Gillespie  Inspector: Bill Hendershot  Date Permit Issued: 5/10/2011  Date Well Work Commenced: 5/16/2011  Date Well Work Completed: 11/11/2011  Verbal Plugging:  Date Permission granted on:  Rotary Cable Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'	Tubing drilling 20" 100' 13 3/8" 412' 9 5/8" 3415'	g 00' 100' 2' 412' 15' 3415'	up Cu. Ft. Driver 462 cf
Agent: Eric Gillespie 13 3/8  Inspector: Bill Hendershot 9 5/8  Date Permit Issued: 5/10/2011 5 1/2  Date Well Work Commenced: 5/16/2011  Date Well Work Completed: 11/11/2011  Verbal Plugging:  Date Permission granted on:  Rotary ✓ Cable Rig Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'	13 3/8" 412' 9 5/8" 3415'	2' 412' 15' 3415'	462 cf
Inspector: Bill Hendershot 9 5/8  Date Permit Issued: 5/10/2011 5 1/2  Date Well Work Commenced: 5/16/2011  Date Well Work Completed: 11/11/2011  Verbal Plugging:  Date Permission granted on:  Rotary  Cable  Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'	9 5/8" 3415'	15' 3415'	1522 c
Date Permit Issued: 5/10/2011 5 1/2  Date Well Work Commenced: 5/16/2011  Date Well Work Completed: 11/11/2011  Verbal Plugging:  Date Permission granted on:  Rotary Cable Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'			<u> </u>
Date Well Work Commenced: 5/16/2011  Date Well Work Completed: 11/11/2011  Verbal Plugging:  Date Permission granted on:  Rotary ✓ Cable Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'	5 1/2" 14107'	07' 14107'	2585 c
Date Well Work Completed: 11/11/2011  Verbal Plugging:  Date Permission granted on:  Rotary ✓ Cable Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'			
Verbal Plugging:  Date Permission granted on:  Rotary Cable Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'			
Date Permission granted on:  Rotary ✓ Cable Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'			
Rotary Cable Rig  Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'			
Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'			
Total Vertical Depth (ft): 7,734'  Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'			
Total Measured Depth (ft): 14,116'  Fresh Water Depth (ft.): 300'			
Fresh Water Depth (ft.): 300'			
			-
Is coal being mined in area (N/Y)? N			
Coal Depths (ft.): 190'			
Void(s) encountered (N/Y) Depth(s) N			
<u> </u>		1	

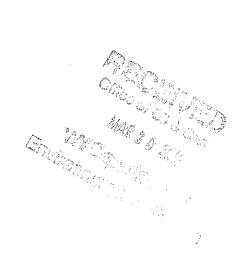
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlen Villians
Signature

3-29-2012 Date

Were core samples taken? Yes	No_N Wer	e cuttings caught during drilling? Yes Y No
Were Electrical, Mechanical or Geophys LWD GR from 7109-14054' MD.	sical logs recorded on this well?	If yes, please list
FRACTURING OR STIMULATING	G, PHYSICAL CHANGE, ETC ORD OF THE TOPS AND I	1). DETAILS OF PERFORATED INTERVALS, C. 2). THE WELL LOG WHICH IS A SYSTEMATIC BOTTOMS OF ALL FORMATIONS, INCLUDING E TO TOTAL DEPTH.
Perforated Intervals, Fracturing, or Stim	ulating:	
(See Attached)		·
Plug Back Details Including Plug Type a	and Depth(s): Cement @ 14	1 093'
	23.110.11.12	1,000
Formations Encountered: Surface:	Top Depth	
(See Attached)		
		The state of the s
	***************************************	
Manager 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
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		MAP a Sacra
		- 400 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6200 - 6

Formation/Lithology	Top Depth (ft)	Bottom Depth (ft)
SS/SILT/SHALE	0	190
Coal	190	200
SS	200	800
SS/SHALE	800	850
LS/SS	850	950
SS	950	1430
Big Lime	1430	1570
Big Injun	1570	1750
SHALE/SS	1750	2000
SILT/SHALE	2000	3000
SS/SHALE	3000	3300
SILT	3300	3450
SS	3450	3550
SHALE/SILT	3550	7275
Geneseo	7275	7298
Tully	7298	7331
Hamilton	7331	7776
Marcellus	7776	14054



## PERFORATION RECORD ATTACHMENT

Well Name and Number: Dellslow Hunting and Fishing 8H (833120)

PERFO	RATION RE	CORD			S	TIMULATION	ON RECORD	)		
	Interval F	erforated		*******			uid		ng Agent	Average
Date	From	То	Date	Interval	Treated	Туре	Amount	Туре	Amount	Injection
10/15/11	13,583	13,965	10/15/11	13,583	13,965	Slk Wtr	10,183	Sand	573,180	84.0
10/16/11	13,108	13,490	10/16/11	13,108	13,490	Slk Wtr	10,674	Sand	572,746	83.0
10/16/11	12,633	13,015	10/16/11	12,633	13,015	Slk Wtr	11,761	Sand	569,084	84.0
10/18/11	12,158	12,540	10/18/11	12,158	12,540	Slk Wtr	10,119	Sand	571,934	84.0
10/19/11	11,683	12,065	10/19/11	11,683	12,065	Slk Wtr	9,969	Sand	571,215	83.0
10/19/11	11,206	11,590	10/19/11	11,206	11,590	Slk Wtr	9,903	Sand	573,759	84.0
11/08/11	10,733	11,115	11/08/11	10,733	11,115	Slk Wtr	10,304	Sand	573,374	86.0
11/08/11	10,258	10,632	11/08/11	10,258	10,632	Slk Wtr	9,389	Sand	570,870	83.0
11/08/11	9,783	10,165	11/08/11	9,783	10,165	Slk Wtr	9,665	Sand	571,528	85.0
11/09/11	9,313	9,690	11/09/11	9,313	9,690	Slk Wtr	9,586	Sand	570,058	84.0
11/09/11	8,829	9,215	11/09/11	8,829	9,215	Slk Wtr	11,191	Sand	572,531	83.0
11/10/11	8,355	8,740	11/10/11	8,355	8,740	Slk Wtr	9,553	Sand	568,935	85.0
11/10/11	7,883	8,265	11/10/11	7,883	8,265	Slk Wtr	9,632	Sand	573,996	86.0
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DATE: 3/2/12

API#: 47-087-04696

## State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm name:Virginia & Delmar Eagle	Oper	rator Well No.:	HR 426_	<del></del>		
LOCATION: Elevation:734'	Quad	drangle:	Gay, WV 7.5	5'		
District: Ready	Country	Door				
District: Reedy Latitude: 6880 Feet South of 38	County	Min 30	Sec.			
Longitude 5913 Feet West of 81	Deg. 30	Min. 00	Sec.			
<del>-</del>						
Company:Hard Rock Exploration	•	<del>-</del>	1			
	Casing &	Used in	Left in well	Cement fill		
471 606476 (1 7) 170 1	Tubing	drilling		up Cu. Ft.		
Address: 2034 Martins Branch Road	2011	1	1.53	>711		
Charleston WV, 25312	20"	16'	16'	N/A		
Agent: Marc Scholl	13 3/8"	84'	84'	105Cuft		
Inspector: Ed Gainer	9 5/8" 7"	670'	670'	336 CuFt		
Date Permit Issued: 6/13/11	<u> </u>	2200'	2200'	470 CuFt		
Date Well Work Commenced: 12/9/11	4.5"	6786'	6786'	130 CuFt		
Date Well Work Completed: 12/28/11	Don Comme	I no form TON	2670) 46113	<u> </u>		
Verbal Plugging:  Date Permission granted on:	Kan Gamma	Log from KOP(	3670' – 4611'M	<u>リ)                                    </u>		
Rotary x Cable Rig Total Depth (feet): 6853'TMD, 4276'TVD						
Fresh Water Depth (ft.): 60°, 512'						
Fresh water Depth (10.): 00 , 312				<del> </del>		
Salt Water Depth (ft.): 1736', 1996'						
Dan Water Depth (11.). 1750 , 1750	<u>                                     </u>		<u> </u>	<u> </u>		
Is coal being mined in area (N/Y)? N						
Coal Depths (ft.): N/A	<del></del>					
Contropins (tu)	ı	1	I	1		
OPEN FLOW DATA				• .		
Producing formationLower Huron_ShalePay zone depth (ft) 4179'MD- 6853'MD						
4134'TVD 4276' TVD						
Gas: Initial open flow_OdorMCF/d	Oil: Initial or	en flow	Bbl/d			
Final open flow 1200 MCF/d	Final open	flow	Bbl/d			
Time of open flow between initial and f	final tests	72 Ho	ours			
Static rock Pressure psig (surface	e pressure) af	ter 72 I	т	· 查可其可以可可用的 使使用 grow		
	,		W e			
Second producing formation	Pav zor	ne depth (ft)		e of OH & Cas		
	Initial open fl	* ' /—	Bbl/d			
	inal open flow		bl/d A	PR 0 2 2012		
Time of open flow between initial and f		Hou				
	e pressure) af			lebaliuset of		
	. ,		0.00			
NOTE: ON BACK OF THIS FORM PUT THE I	OLLOWING:	1). DETAILS	OF PERFORAT	ED		
INTERVALS, FRACTURING OR STIMULATIN	G, PHYSICAL	L CHANGE, E	TC. 2). THE W	ELL		
LOG WHICH IS A SYSTEMATIC DETAILED	<b>GEQLOGICAL</b>					
INCLUDING COAL ENCOUNTERED BY THE	WELLBOKE.					
Signed:	myhn	•				
By: Vres. dyx+						
Date: 3/30/2012	**					

· Top:	Bottom:
0	415
415	495
590	610
1700	1830
1830	1910
1910	2040
2340	2355
2355	4276
4135	4276
	0 415 590 1700 1830 1910 2340 2355

Formation depths are TVD

12/18/11 Run 159 jts of R-3 4.5" 11.6ppf N-80 casing with 12-stage Team downhole mechanical packer system to depth of 6786' GL. Land casing through BOP and ND BOP. RU DSA and 10k frac valve. Drop balls for toe sub and follow with low rate N2. Land balls and pressure up on casing to set packers and open Stage sleeve. Open at 3687psi and pumped total of 136k scf N2. RU to perform annular squeeze. Pump total of 100sx type 1 3% mixed at 15ppg.

	Sleeve	Sleeve Size	Ball	<b>Packers</b>
Stage 1	6697.3	HP	N/A	6603.8
Stage 2	6477.0	1.594	1.719	6383.5
Stage 3	6256.7	1.750	1.875	6163.2
Stage 4	6036.4	1.906	2.031	5942.9
Stage 5	5816.1	2.063	2.188	5722.6
Stage 6	5595.5	2.219	2.344	5501.9
Stage 7	5374.9	2.375	2.500	5281.3
Stage 8	5154.4	2.531	2.656	5060.9
Stage 9	4934.1	2.688	2.813	4840.6
Stage 10	4713.6	2.844	2.969	4620
Stage 11	4493.0	3.036	3.250	4399.4
Stage 12	4272.5	3.286	3.500	4179
				2543

12/27/12-12/28/12 MIRU Baker Stim Crew. Start pumping N2 on Stg1 and increase rate as pressure allows. Design rate 100kscf/min. Pump total of 1MMscf N2. Drop ball for Stg 2 and pump ball down with low rate N2. Open sleeve and increase rate to 100kscf/min. Pump total of 1MMscf N2. Drop ball for Stg 3. Repeat process for Stgs 3-12.

	Stg 1	Stg 2	Stg 3	Stg 4	Stg 5	Stg 6	
Max P	5655	5931	5854	5427	5411	5376	
Avg P	5440	5714	5701	5313	5360	5319	
Max R	107.0	100.0	105.0	112.0	103.0	106.0	•
Avg R	105.0	95.7	101.0	103.0	101.0	100.0	201
5 min	2060	2195	2306	2312	2226	2427	And the same of th
							Cities of the Assess
	Stg 7	Stg 8	Stg 9	Stg 10	Stg 11	Stg 12	
Max P	6019	5965	5686	5423	5154	4615	APR 6.2 2012
Avg P	5739	5825	5303	5243	5020	4259	property and the second second
Max R	101.0	103.0	104.0	108.0	105.0	104.0	Section of the sectio
Avg R	91.0	100.0	102	104.0	103.0	101.0	
5 min	2471	2516	N/A	2463	2297	1842	rdaga pada Prancis

DATE: 3/22/12

API#: 47-087-04698

## State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm name:Russel Moore	Ope	rator Well No.:	HR 449_	
LOCATION: Elevation:670'	_ Quad	frangle:	Reedy WV 7	.5'
District Reedy	County	Roar	ıe	
District:Reedy_ Latitude: 8043 Feet South of 38De	County g. 55 Mir	. 00 Sec.	<u> </u>	<u></u>
Longitude_6842_Feet West of 81_Deg	z. 25 Min. (	00 Sec.		
Company: Hard Rock Exploration				
	Casing &	Used in	Left in well	Cement fill
	Tubing	drilling		up Cu. Ft.
Address: 1244 Martins Branch Road				
Charleston WV, 25312	20"	25	25	N/A
Agent: Marc Scholl	13 3/8"	84	84	56ft3 CTS
Inspector: Ed Gainer	9 5/8"	595	595	300 ft3 CTS
Date Permit Issued: 7/12/11	7"	2334	2334	528 ft3 CTS
Date Well Work Commenced: 1/20/12	4.5"	7268	7268	130 ft3
Date Well Work Completed: 2/15/12				
Verbal Plugging:			(3515' – 4152'T	VD)
Date Permission granted on:	Ran Gyro log	g from 3515' -	Surface	
Rotary x Cable Rig				
Total Depth (feet): 7329'TMD, 4152'TVD				
Fresh Water Depth (ft.): 60', 200'				
Salt Water Depth (ft.): 1100', 1620'				
Is coal being mined in area (N/Y)? N		1		
Coal Depths (ft.):N/A				ļ
OPEN FLOW DATA				
Th. 1 . 1 . 1	1 ~	1 4 600 46		
Producing formation Lower Huron Sha	alePay zone	- ' '		
			098'TVD - 41	152' TVD
Gas: Initial open flow_375MCF/d Oil:				
Final open flow1500+MCF/d	Final open f	low	Bbl/d	
Time of open flow between initial and				RECEIVED
Static rock Pressurepsig (surface	ce pressure) a	fterHou	urs (	Office of Oil & Gas
			***	2 2 2 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Second producing formation		ne depth (ft)_		APR 02 2012
Gas: Initial open flowMCF/d Oil:	Initial open f	low	Bbl/d	AFN V & ZUIL
Final open flow MCF/d F	inal open flo	w 1	Bb1/d	
Time of open flow between initial and	final tests	Hou	ırs	NV Department of
	ce pressure) a	fter Ho		ronmental Protection
			genwa a A A ;	E APPLE DE SEE SEE SEE SEE SEE SEE SEE SEE SEE
NOTE: ON BACK OF THIS FORM PUT THE	FOLLOWING	: 1). DETAILS	OF PERFORA	red
INTERVALS, FRACTURING OR STIMULATII				
LOG WHICH IS A SYSTEMATIC DETAILED	GEOLOGICA	LRECORD C	OF ALL FORMA	TIONS,
INCLUDING COAL ENCOUNTERED BY THE	WELLBORE.			
Signed:	-//	<del></del>		
By: President				
Date: 1/30/201~				

Formation:	Top:	<u>Bottom</u> :	
Soil, Sand, Shale	0	1488	
Salt Sand	1488	1748	
Lime	1748	1748	
Injun	1788	1808	
Shale	1808	2193	
Coffee Shale	2243	2258	
Devonian Shale	2258	4152	
Lower Huron Section	4066	4152	
All depths shown As TVD			

01/27/12 Run total of 169 jts of R-3 4.5" 11.6 ppf N-80 casing to depth of 7268' set at 7276' KB). Run 14 stage Packers Plus mechanical packer system. Finish running casing at approx. 2:30am—could not get landing joint out of hanger. Pull hanger back up through table and break out with tongs. Go to second rig and pick up another hanger. Land casing in head and RU flanged 10k valve. MIRU Baker and start pumping N2 at 5:20am. Pressure up to 2700psi and shut down for 20 min—packers set. Resume pumping on casing and pressure up to 4093psi to open shoe. RU to cmt 4x7 annulus. Dump squeeze with 100sx type 1 3% CaCl mixed at 15ppg followed with 3bbl water.

	Sleeve	Sleeve Size	Packers	
Stage 1	7275.0	Shoe	7138	
Stage 2	7004	1.375	6916	
Stage 3	6782	1.625	6693	
Stage 4	6559	1.750	6471	
Stage 5	6337	1.875	6248	
Stage 6	6114	2.125	6026	
Stage 7	5892	2.250	5803	
Stage 8	5669	2.500	5581	Office of Oil & Gas
Stage 9	5447	2.625	5358	
Stage 10	5224	2.875	5136	APR 02 2012
Stage 11	5002	3.000	4913	AIN V & ZUIZ
Stage 12	4779	3.250	4690	6.8 de =
Stage 13	4557	3.375	4468	MV Department of
Stage 14	4334	3.625	4245	Wirommental Protection
Anchor			2648	

02/14/12 MIRU Baker. Pressure test and start pumping at 9:20am. Bring rate up slowly on Stg 1 and pump total of 1 MMscf N2. Shut down and drop ball for Stg 2. Wait 10min for ball and start pumping at 20k scf/min. Land ball and open sleeve at 4597 psi. Up rate and pump total of 1 MMscf N2. Drop ball for Stg 3. Repeat for Stg3-Stg14.

	Stg 1	Stg 2	Stg 3	Stg 4	Stg 5	Stg 6	Stg 7
Max P	5962	5955	5819	5760	<del>56</del> 23	5211	5911
Avg P	4929	5408	5647	5678	5506	4936	5830
Max R	94.8	99.0	107.0	106.0	109.0	103.8	103.7
Avg R	83.0	90.5	104.2	105.8	106.9	101.6	102.8
5 min	1918	2120	N/A	N/A	2109	N/A	2050
2 min	2350	2446	2280	2420	2299	2318	2485
	Stg 8	Stg 9	Stg 10	Stg 11	Stg 12	Stg 13	Stg 14
Max P	<b>Stg 8</b> 5795	<b>Stg 9</b> 5687	Stg 10 5816	<b>Stg 11</b> 5979	<b>Stg 12</b> 5811	<b>Stg 13</b> 5529	Stg 14 5333
Max P Avg P	•	_	_	<del></del>	_	_	_
	5795	5687	5816	5979	5811	5529	5333
Avg P	5795 5662	5687 5595	5816 5705	5979 5874	5811 5673	5529 5441	5333 5290
Avg P Max R	5795 5662 104.5	5687 5595 106.7	5816 5705 106.9	5979 5874 99.8	5811 5673 105.4	5529 5441 108.0	5333 5290 105.0

DATE: 3/29/12

API#: 47-087-04701

## State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm name:Roy Delaney_	Ope	rator Well No.;	HR 446_	
LOCATION: Elevation:694'	Qua	drangle:	Reedy WV 7	.5'
District: Reedy  Latitude: 11376 Feet South of 38 De  Longitude 728 Feet West of 81 De	County: g,55M eg,27Min,	Roar 1in. 00 Sec. 30 Sec.	ae	· 
Company:Hard Rock Exploration	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 1244 Martins Branch Road				
Charleston WV, 25312	20"	26	26	N/A
Agent: Marc Scholl	13 3/8"	84	84	N/A
Inspector: Ed Gainer	9 5/8"	635	635	336 ft3 CTS
Date Permit Issued: 7/20/11	7"	2283	2283	513 ft3 CTS
Date Well Work Commenced: 12/19/11	4.5"	7052	7052	N/A
Date Well Work Completed: 1/9/12				
Verbal Plugging:	Ran Gamma	Log from KOP	(3510' – 4152'T	VD)
Date Permission granted on:	Ran Gamm L	og from 2500'	- Surface	
Rotary x Cable Rig				
Total Depth (feet): 7105'TMD, 4157'TVD				
Fresh Water Depth (ft.): 200'				
Salt Water Depth (ft.): 1160', 1780'		-		
Is coal being mined in area (N/Y)? N		-		
Coal Depths (ft.): N/A				
OPEN FLOW DATA  Producing formation Lower Huron Sha	ile_Pay zone	depth (ft) 411	1'MD- 7105 'I	MD
	<u> </u>		39'TVD - 41:	
Gas: Initial open flow_800MCF/d Oil:	Initial open fl	low I	3b1/d	
Final open flow 800 MCF/d Fi	inal onen flov	r Ti	h1/d	
Time of open flow between initial and f	inal tests	24 He	ours F	· Profession of the second
Static rock Pressure psig (surfac	e pressure) af	ter Hou	rs eree.	
	,		Unic	e of OH & Gas
Second producing formation	Pay zor	ne depth (ft)		
Gas: Initial open flow MCF/d Oil:			Bbl/d A	PR 0 2 2012
Final open flow MCF/d Fi		***************************************	bl/d	
Time of open flow between initial and f				lepeniment of
Static rock Pressure psig (surface				regeneral Production Garana Production
NOTE: ON BACK OF THIS FORM PUT THE FINTERVALS, FRACTURING OR STIMULATIN LOG WHICH IS A SYSTEMATIC DETAILED INCLUDING COAL ENCOUNTERED BY THEY Signed:  By: Pusy don't Date: 3/30/2012	IG, PHYSICA GEOLOGICA	1). DETAILS L CHANGE, E	OF PERFORAT TC. 2). THE WI	ED ELL

Formation:	Top:	Bottom:
Soil, Sand, Shale	0	1512
Salt Sand	1512	1772
Lime	1772	1812
lnjun	1812	1832
Shale	1832	2217
Coffee Shale	2267	2282
Devonian Shale	2282	4160
Lower Huron Section	4072	4157
Shale Coffee Shale Devonian Shale	1832 2267 2282	1832 2217 2282 4160

#### All depths shown As TVD

01/09/12 Run total of 164 joints of R-3 4.5" casing 11.6ppf N-80 with 14 stg Packers Plus mechanical packer system. Total depth of casing at 7052' gl. Land casing hanger in head through BOP. SWI. Will test well as Natural Producer.

	Sleeve	Sleeve Size	<b>Packers</b>
Stage 1	Shoe	N/A	6919
Stage 2	6786	1.250	6697
Stage 3	6563	1.500	6474
Stage 4	6341	1.625	6252
Stage 5	6118	1.750	6030
Stage 6	5896	2.000	5807
Stage 7	5715	2.125	5626
Stage 8	5492	2.375	5404
Stage 9	5270	2.500	5181
Stage 10	5048	2.750	4959
Stage 11	4825	2.875	4736
Stage 12	4644	3.125	4556
Stage 13	4422	3.250	4333
Stage 14	4199	3.500	4111
Anchor			2598

PECHIVED Office of OH & Cas

APR 02 2012

MW Department of Environmental Protection

DATE: 3/22/12

API#: 47-087-04703

## State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm name:Joyce Howard Conrad	Oper	rator Well No.:	HR 452			
LOCATION: Elevation: 712'	Quac	irangle:	Reedy WV 7.	5'		
District: Reedy County: Roane  Latitude: 13380 Feet South of 38 Deg. 55 Min. 00 Sec.  Longitude 2703 Feet West of 81 Deg. 27 Min. 30 Sec.						
Company:Hard Rock Exploration		Тт	[ T 0/ 1 33	la ten		
	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.		
Address: 1244 Martins Branch Road						
Charleston WV, 25312	20"	29	29	N/A		
Agent: Marc Scholl	13 3/8"	84	84	56ft3 CTS		
Inspector: Ed Gainer	9 5/8"	673	673	324 ft3 CTS		
Date Permit Issued: 7/26/11	7"	2332	2332	504 ft3 CTS		
Date Well Work Commenced: 1/10/12	4.5"	7419	7419	N/A		
Date Well Work Completed: 1/19/12						
Verbal Plugging:			(3539° – 4161°T	VD)		
Date Permission granted on:	Ran Gamm L	og from 2600'	- Surface			
Rotary x Cable Rig						
Total Depth (feet): 7419'TMD, 4178'TVD						
Fresh Water Depth (ft.): 60'		<u> </u>				
Salt Water Depth (ft.): 1208', 1755'						
Is coal being mined in area (N/Y)? N						
Coal Depths (ft.):N/A	]	1		1		
OPEN FLOW DATA						
Producing formationLower Huron_Sha	ılePay zone		03'MD- 7419 ' 080'TVD – 41			
Gas: Initial open flow 1200 MCF/d Oil	l. Initial open			, , , ,		
Final open flow 1200 MCF/d	Final open flo	1X/	Bb1/d	Basis South State Will Williams with		
Time of open flow between initial and the	i mai opon no final tests	24 H				
Static rock Pressure psig (surface				Difice of Oil & Cas		
paig (auriae	c pressure) ar	1100	* * * * * * * * * * * * * * * * * * * *			
Second producing formation	Day 701	ne depth (ft)		APR 02 2012		
	Initial open f		Bbl/d			
	inal open flov		361/d \(\frac{1}{2}\)	W Department of		
Time of open flow between initial and the		Y Hou	JUDU U	The second secon		
	e pressure) af		us (Lagry) Durs			
Static rock Pressurepsig (surface	e pressure) ar	ternc	oms			
NOTE: ON BACK OF THIS FORM PUT THE INTERVALS, FRACTURING OR STIMULATING LOG WHICH IS A SYSTEMATIC DETAILED INCLUDING COAL ENCOUNTERED BY THE Signed:  By: Printer Date: 1/20/20)	IG, PHYSICA GEOLOGICA	L CHANGE, I	ETC. 2). THE W	ELL		

Formation:	Top:	Bottom	
Soil, Sand, Shale	0	1530	
Salt Sand	1530	1790	
Lime	1790	1830	
lnjun	1830	1850	
Shale	1850	2235	
Coffee Shale	2285	2300	
Devonian Shale	2300	4178	
Lower Huron Section	4090	4178	

#### All depths shown As TVD

01/19/12 Run total of 171 jts of R-3 4.5" 11.6 ppf casing to depth of 7362' with 14 stg Packers Plus mechanical packer system. Finish running casing and RU wellhead at 4:00pm. Shut well in. Will test well as natural producer.

	Sleeve	Sleeve Size	Packers
Stage 1	7360	Shoe	7187
Stage 2	7047	1.250	6959
Stage 3	6825	1.500	6736
Stage 4	6644	1.750	6513
Stage 5	6421	2.000	6290
Stage 6	6198	2.125	6068
Stage 7	5934	2.250	5845
Stage 8	5711	2.500	5581
Stage 9	5489	2.625	5358
Stage 10	5224	2.875	5135
Stage 11	5001	3.000	4912
Stage 12	4778	3.250	4690
Stage 13	4556	3.375	4426
Stage 14	4292	3.625	4203
Anchor			4647

pecents Office of OI & Gas

APR 02 2012

My Depairment of Emission

DATE: 3/1/12

API#: 47-087-04707

## State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm name:William P. Rogers	Ope	rator Well No.:	HR 323_	
LOCATION: Elevation:970'				
District: Harper	County	Roa	ne	
Latitude: 4428 Feet South of 38 Deg	650miy 7. 45 M	in 00 Sec		
Longitude 7635 Feet West of 81	Deg. 30	Min. 00	Sec.	
			<del></del>	
Company:Hard Rock Exploration				
	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 1244 Martins Branch Road				
Charleston WV, 25312				
Agent: Marc Scholl	13 3/8"	33	33	N/A
Inspector: Ed Gainer	9 5/8"	890	890	420 ft3 CTS
Date Permit Issued: 9/21/11	7"	2326	2326	530 ft3 CTS
Date Well Work Commenced: 11/6/11	4.5"	7620	7620	130 CuFt
Date Well Work Completed: 12/4/11				
Verbal Plugging:	Ran Gamma	Log from KOP	(3784' – 4881'M	D)
Date Permission granted on:				
Rotary x Cable Rig				
Total Depth (feet): 7666'TMD, 4400'TVD				
Fresh Water Depth (ft.): 575', 650'				
Salt Water Depth (ft.): 1936'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):N/A				
OPEN FLOW DATA	Marine.			·
Producing formationLower Huron_Sha	.lePay zone			
	N. 1. 1. 1. 1		20'TVD - 440	00° TVD
Gas: Initial open flow odor MCF/d C	лі: mitiai ope	n How		
Final open flow 1500+ MCF/d	Final open II	low		
Time of open flow between initial and i				
Static rock Pressurepsig (surface	e pressure) at	ter72		A RESIDENCE OF THE PROPERTY OF
				Mice of Oil & Cas
Second producing formation		ne depth (ft)_		Service Tales & Paper of Security
	Initial open fl		Bbl/d	APR 02 2012
	inal open flow		3b1/d	
Time of open flow between initial and f	inal tests	Hou	rs , a	ES T Gray
Static rock Pressure psig (surfac	e pressure) af	terHo	urs	W Demonstrate
			Franklin (1915)	
NOTE: ON BACK OF THIS FORM PUT THE F			OF PERFORAT	ED
INTERVALS, FRACTURING OR STIMULATIN				
LOG WHICH IS A SYSTEMATIC DETAILED		LRECORD O	F ALL FORMAT	TONS,
INCLUDING COAL ENCOUNTERED BY THE	WELLBORE.			
Signed:	proper	<del>~</del>		
By: prositional /				
Date: 1/30//3/01~	•			

Formation:	Top:	Bottom:
C-11 C-1-4 Ch-1-	^	F40
Soil, Sand, Shale	0	510
Sand	510	595
Sand	650	710
Sand/Shale	710	1780
Salt Sand	1780	2000
Lime	2000	2090
Injun/Squaw	2090	2290
Coffee Shale	2550	2565
Devonian Shale	2565	4400
Lower Huron Section	4320	4400

#### All formation depths shown As TVD

11/14/11 Run 177 joints of R-3 4.5" 11.6ppf casing with 15 stg Packers Plus Mechanical packer/sleeve completion system. Run total of 7620' KB. RU DSA and 10k frac valve. Start pumping 2 bbl water, drop (2) 1.25" balls for circ shoe and follow with 2 bbl water and N2 at 5k scf/min. Land balls and pressure up to 3000psi. Shut down hold pressure 20min. Continue pumping to open Stg 1, pressure up to 3800 psi to open shoe. Pump total of 100sx mixed at 15ppg followed with 4bbl water on annulur squeeze. SWI.

	Sieeves	<b>Packers</b>	Size	Ball	
Stage 1	7620	7484	N/A	N/A	
Stage 2	7350	7261	1.25	1.5	
Stage 3	7169	7038	1.5	1.625	
Stage 4	6946	6815	1.625	1.75	
Stage 5	6723	6592	1.75	1875	
Stage 6	6501	6370	1.875	2	
Stage 7	6275	6147	2	2.125	
Stage 8	6055	5924	2.125	2.375	Bure some has the state of the sound of the
Stage 9	5832	5701	2.375	2.5	Section 1 to 1
Stage 10	5609	5479	2.5	2.75	Office of the Cas
Stage 11	5386	5256	2.75	2.875	
Stage 12	5163	5033	2.875	3.125	APR 0 2 2012
Stage 13	4940	4810	3.125	3.25	
Stage 14	4717	4586	3.25	3.5	
Stage 15	4494	4405	3.5	3.75	<ul> <li>Sp. 2017 Substituting at the Conference of the Confer</li></ul>
		2642			Part of the second of the seco

12/3/12 - 12/4/12 MIRU Baker Stim crew. Start pumping on Stg 1 at half rate and work up to design rate of 100kscf/min. Pump total of 1MMscf. Shut down and drop ball for stage 2. Pump ball to sleeve with low rate N2 and open sleeve. Up rate and pump total of 1MMscf N. Drop ball for Stage 3 and repeat process for Stgs 3 - 15.

Max P Avg P Max R	Stg 1 5975 5650 98.2	Stg 2 5979 5914 100.0	Stg 3 5990 5838 106.8	Stg 4 5980 5840 102.0	Stg 5 5968 5704 105.0	Stg 6 5697 5620 109.0	Stg 7 5460 5402 103.4	Stg 8 5583 5530 104.0
Avg R 5 min	95.1 1984	98.0 2020	94.2 2238	100.0 2313	102.0 2085	104.0 2171	102.4 2318	103.0 N/A
Max P Avg P Max R Avg R 5 min	Stg 9 5873 5789 109.0 107.0 2453	Stg 10 5603 5562 103.0 102.0 N/A	Stg 11 5624 5534 107.0 105.0 2356	Stg 12 4661 4530 104.0 103.0 1955	Stg 13 5137 5072 105.0 104.0 2236	Stg 14 5159 4979 103.5 102.0 2100	Stg 15 4960 4882 107.0 104.0 2179	

DATE: 3/22/12

API#: 47-087-04708

## State of West Virginia Department of Environmental Protection Office of Oil and Gas

Farm name:Orland Greenleaf	Ope	erator Well No	:HR 453_	
LOCATION: Elevation: 705'	Qua	drangle:	Peniel WV 7	7.5'
District: Reedy	County:	Roa	ine	
Latitude: 1201_Feet South of 38 Dep	g. 52 M	in. 30 Sec	),	······································
Longitude_7409' Feet West of 81	Deg. 25 M	in00Se	ec.	
Company:Hard Rock Exploration		·		
	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 1244 Martins Branch Road				
Charleston WV, 25312	20"	18	18	N/A
Agent: Marc Scholl	13 3/8"	84	84	56ft3 CTS
Inspector: Ed Gainer	9 5/8"	633	633	306 ft3 CTS
Date Permit Issued: 9/21/11	7"	2332	2332	537 ft3 CTS
Date Well Work Commenced: 1/28/12	4.5"	7632	7632	130 ft3
Date Well Work Completed: 2/16/12	<u> </u>			
Verbal Plugging:	Ran Gamma	Log from KOI	'(3560' – 4122'T	VD)
Date Permission granted on:				
Rotary x Cable Rig				
Total Depth (feet): 7713'TMD, 4159'TVD			•	
Fresh Water Depth (ft.): 50'				
O LITTLE TO DE CONTROL OF THE CONTRO		<u> </u>		
Salt Water Depth (ft.): 1660'				
T 11				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): N/A		ļ	!	
OPEN FLOW DATA				
Producing formation Lower Huron Sha	alePay zone	depth (ft) 42	200'MD-7713 '	MD 59' TVD
Gas: Initial open flow_120MCF/d Oil:	Initial onen f	low	BM/d - 41	Eren de la
Final open flow 1500+ MCF/d  Time of open flow between initial and	Final open f	low	Bbl/d Office	
Time of open flow between initial and	final tests	72 1	Trong Siling	ful vii & Gas
Static rock Pressure psig (surface	e preceive) af	ter Hou		30
poig (burin	o pressure) ar	1100	as Al	PR 02 2012
Second producing formation	Pay zoi	ne depth (ft)		
Gas: Initial open flow MCF/d Oil:	Initial open fl	ow	Bbl/d WV D	epariment of
Final open flow MCF/d F	inal open flow	7 I	ANT MOON	enal Protection
Time of open flow between initial and	final tests	Hou	re	and the state of t
Static rock Pressure psig (surface	e pressure) af	ter Ho	ours	
porg (variation	o pressure) ur		, arb	
NOTE: ON BACK OF THIS FORM PUT THE INTERVALS, FRACTURING OR STIMULATING LOG WHICH IS A SYSTEMATIC DETAILED INCLUDING COAL ENCOUNTERED BY THE Signed:  By: President	IG, PHYSICAI GEOLOGICAI	L CHANGE, 1	ETC. 2), THE WE	ELL
Date: 3/20/2017		<del></del>		

Formation:	Top:	Bottom:
Soil, Sand, Shale	0	1524
Salt Sand	1524	1784
Lime	1784	1824
Injun	1824	1844
Shale	1844	2229
Coffee Shale	2279	2294
Devonian Shale	2294	4172
Lower Huron Section	4095	4159

#### All depths shown As TVD

02/06/12 Run total of 176 jts of 4.5" 11.6ppf N-80 casing to depth of 7632' set at 7637' KB. Run 16 stage packers plus system. Pick up and assemble 10k wellhead. Start pumping N2 to pressure up and set packers. Pump N2 and pressure up to 3000psi and hold for 20min. Continue to pump N2 for total of 154k scf to open pump out shoe at 3816psi. RU and perform annular squeeze with 100sx mixed at 15ppg (21 bbl). Follow cmt with 3 bbl water.

		Sleeve	Sleeve Size	Packers
	Stage 1	7638	P/O Shoe	7501
	Stage 2	7367	1.375	7278
	Stage 3	7144	1.625	7055
	Stage 4	6963	1.750	6832
	Stage 5	6740	1.875	6609
	Stage 6	6517	2.000	6387
	Stage 7	6253	2.125	6164
	Stage 8	6030	2.250	5941
·	Stage 9	5849	2.375	5718
	Stage 10	5584	2.500	5495
Office of Oil & Gas	Stage 11	5361	2.750	5272
	Stage 12	5138	2.875	5049
. nn a G 9847	Stage 13	4915	3.000	4826
APR 02 2012	Stage 14	4734	3.125	4603
<i>y</i> -	Stage 15	4511	3.250	4423
WW Department of	Stage 16	4330	3.500	4200
Environmental Protection	Anchor			2642

02/15/12 Start pumping on Stg 1 and bring trucks to rate. Pump total of 1 MMscf N2. SD and drop ball for Stg 2. Wait for ball. Start pumping ball down at 20k scf/min and land on seat. Up rate and open sleeve at 4486psi. Bring trucks to rate and pump total of 1 MM scf. Drop ball for Stg 3. Wait for ball to drop. Pump N2 to open sleeve – Repeat stim process for Stg 3- Stg 16.

	Stg 1	Stg 2	Stg 3	Stg 4	Stg 5	Stg 6	Stg 7	Stg 8
Max P	5968	5976	5742	5694	5439	5446	5086	5210
Avg P	4245	5945	5602	5543	5301	5371	5036	5036
Max R	105.0	100.0	105.0	106.0	107.0	107.0	105.0	111.0
Avg R	0.08	98.7	103.0	105.0	105.0	106.8	104.0	105.0
5 min	1924	2099	2042	2092	1985	2006	1965	2015
2 min	2305	2499	2238	2246	2255	2241	2188	2211
	Stg 9	Stg 10	Stg 11	Stg 12	Stg 13	Stg 14	Stg 15	Stg 16
Max P	5099	5256	5219	5018	5037	4628	4538	4398
Avg P	5020	5210	5146	4998	4865	4567	4494	4099
Max R	110.0	106.0	109.0	103.0	103.0	105.4	104.0	103.0
Avg R	106.0	105.0	106	102.0	102.0	4567.0	102.0	89.0
5 min	2044	2293	2163	2268	2040	2084	2214	2120
2 min	2149	2500	2360	2426	2174	2173	2320	2230

# State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	08/30/2012	
API#:	47-091-00825	

ON: Elevation: 1410.00	Quadrangle: _	Grafton				
District: Court House	County: Taylor					
Latitude: 7,500 Feet South of 39 Deg. Longitude 3,900 Feet West of 80 Deg.		30 Sec				
Longitude 3.900 Feet West of 80 Deg.	02Min	Sec	•			
Company: Petroleum Development Corporation						
Address: 120 Genesis Boulevard	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.		
Bridgeport, WV 26330	11 3/4"	32'	32'	Sanded In		
Agent: Bob Williamson	8 5/8"	1108'	1108'	345		
Inspector: Bryan Harris	4 1/2"	4550'	4550'	245		
Date Permit Issued: WorkOver:8/15/2005			Squeeze	319		
Date Well Work Commenced: 10/06/2005						
Date Well Work Completed: 10/17/2005				***************************************		
Verbal Plugging:			RECEIVE			
Date Permission granted on:		C#	ce of Oil 8	. Gas		
Rotary Cable Rig			12 A 151831	Ó		
Total Vertical Depth (ft): 4576'			SEP 0 4 20	la.		
Total Measured Depth (ft): 4576'		F. O. F.		ant Of		
Fresh Water Depth (ft.): 70', 105', 360'		Maga Sana alakar	rengojaj P	ratection		
Salt Water Depth (ft.): N/A		Berman in Wilson	The first of a second			
Is coal being mined in area (N/Y)? N						
Coal Depths (ft.): 70-73						
Void(s) encountered (N/Y) Depth(s) N						
N FLOW DATA (If more than two producing formation oducing formation Benson Pay 2 as: Initial open flow 97 MCF/d*Oil: Initial open flow Final open flow 163 MCF/d Final open flow Time of open flow between initial and final tests atic rock Pressure 1450 psig (surface pressure) at	zone depth (ft)_ lowB vBb Hours	4424-4425.5 bl/d bl/d	ita on separate sh	cet)		
cond producing formation 4th Sand Pay zo as: Initial open flow 20 MCF/d Oil: Initial open flow Final open flow Not Taken MCF/d Final open flow Time of open flow between initial and final tests atic rock Pressure 100 psig (surface pressure) at	low Bb	bl/d ·l/d				
under penalty of law that I have personally examined trachments and that, based on my inquiry of those indi- information is true, accurate, and somplete.						

Signature

Date

Were core samples taken? Yes No XX	Were cuttings caught during drilling? Yes	No_XX
Were Electrical, Mechanical or Geophysical logs recorded on thi Cased Hole Bond Log from 2595' - 1900'.	s well? If yes, please list Allegheny GR/PPT/T	T
NOTE: IN THE AREA BELOW PUT THE FOLLOW FRACTURING OR STIMULATING, PHYSICAL CHANG DETAILED GEOLOGICAL RECORD OF THE TOPS COAL ENCOUNTERED BY THE WELLBORE FROM SU	E, ETC. 2). THE WELL LOG WHICH IS A SYS AND BOTTOMS OF ALL FORMATIONS, IN	STEMATIC
Perforated Intervals, Fracturing, or Stimulating:		
Short #1 (47-091-00825) Re-completion: Original Benson		
at 2490' & cement squeeze over 4thSS. Run Alleghen	y Bond Log & new cmt. top at 2060'. RU Ur	niversal on
10/17/2005 & frac with energized cross link with 500 gal 1	5% HCl, 400 sks of 20/40 Sand,and 110,000 se	of Nitrogen
in 513 bbls treated fluid. Break at 2475, avg TP at 23	71 psi. Treat at avg. rate of 23.1 bpm.	
Plug Back Details Including Plug Type and Depth(s): CIBP se	et at 2490' & left in hole after work-over	frac.
Formations Encountered: Top Dep Surface:	oth / Bottom De	epth
See "Well Log" (pg. 2) on original Completion Form.		
	· · · · · · · · · · · · · · · · · · ·	
		****
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		Add to the second
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# State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	08/30/2012	
API#:	47-091-00826	F

CATION: Elevation: 1464.00	Quadrangle: Grafton						
District: Court House  Latitude: 7,225 Feet South of 39 Deg.	County: Taylor  g. 17 Min. 30 Sec.						
Longitude 6.100 Feet West of 80 Deg.	02 Min	Sec					
Company: Petroleum Development Corporation							
Address: 120 Genesis Boulevard	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.			
Bridgeport, WV 26330	11 3/4"	32'	32'	Sanded In			
Agent: Bob Williamson	8 5/8"	1111'	1111'	322			
Inspector: Bryan Harris	4 1/2"	4628'	4628'	234			
Date Permit Issued: WorkOver: 8-15-2005							
Date Well Work Commenced: 10/06/2005							
Date Well Work Completed: 10/11/2005		-					
Verbal Plugging:			: VED				
Date Permission granted on:			Oli & Gas				
Rotary Cable Rig			£ 0040				
Total Vertical Depth (ft): 4659'		SEP 0	4 2012				
Total Measured Depth (ft): 4659'		VAR F Procession	n American de 198				
Fresh Water Depth (ft.): 105'			minseidí Gi Projecí				
Salt Water Depth (ft.): N/A	ft, re, ke, ki	10054,055 1005	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
Is coal being mined in area (N/Y)? N							
Coal Depths (ft.): 101-105, 684-689, 855-860							
Void(s) encountered (N/Y) Depth(s) N							
PEN FLOW DATA (If more than two producing formation Producing formation Benson Pay 2  Gas: Initial open flow 84 MCF/d Oil: Initial open flow MCF/d Final open flow Time of open flow between initial and final tests Static rock Pressure 1300 psig (surface pressure) af	tone depth (ft)_ owB  /BbHours	4518-4519.5 bl/d bl/d	ta on separate sh	eet)			
Second producing formation 4th Sand Pay zoo Gas: Initial open flow 20 MCF/d Oil: Initial open flow Final open flow Not Taken MCF/d Final open flow Time of open flow between initial and final tests Static rock Pressure Not Taken psig (surface pressure) af	Bb Hours	bl/d l/d					

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature

08/31/2012

Date

Were core samples taken? YesNo_XX	Were cuttings caught during drilling? YesNo_XX
Were Electrical, Mechanical or Geophysical logs recordated Hole Bond Log from 2500' - 1600'.	ded on this well? If yes, please list Allegheny GR/PPT/TT
NOTE: IN THE AREA BELOW PUT THE FRACTURING OR STIMULATING, PHYSICAL	FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING ROM SURFACE TO TOTAL DEPTH.
Short #2 (47 001 00826) Pa completion: Original	Benson perfs from 4518-4520 and TOC at 1748. Set Bridge Plug
	with energized cross link with 500 gal 15% HCl, 330 sks of 20/40 Sand,
	Break at 2884, avg. TP at 2405 psi. Treat at avg. rate of 21.2 bpm.
ISIP at 1947 psi.	· · · · · · · · · · · · · · · · · · ·
Plug Back Details Including Plug Type and Depth(s):	CIBP set at 2700' & drilled out to original TD (4600') after work-over frac.
Formations Encountered: Surface:	Top Depth / Bottom Depth
See "Well Log" (pg. 2) on original Completion	n Form.

# State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	1-19-2012
API#:	47-097-03707

m name: Tall Trees	Operator We	Operator Well No.: 6H (831667)			
CATION: Elevation: 1664'	Quadrangle: Rock Cave				
		County: Upshur  50 Min. 00 Sec.			
		n. 00 Se		APR C 3 2012	
Company: Chesapeake Appalachia, L.L.C.					
Address: P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.	
Oklahoma City, OK 73154-0496	20"	20"	20"	Driven	
Agent: Eric Gillespie	13 3/8"	475'	475'	533 cf	
Inspector: Bill Hatfield	9 5/8"	2173'	2173'	1009 cf	
Date Permit Issued: 2-17-2010	5 1/2"	12725'	12725'	2794 cf	
Date Well Work Commenced: 8/18/2010					
Date Well Work Completed: 1/13/2011					
Verbal Plugging:					
Date Permission granted on:					
Rotary Cable Rig					
Total Vertical Depth (ft): 6,814					
Total Measured Depth (ft): 12,728'					
Fresh Water Depth (ft.): 350'					
Salt Water Depth (ft.): None					
Is coal being mined in area (N/Y)? N					
Coal Depths (ft.):					
Void(s) encountered (N/Y) Depth(s)					
Producing formation Marcellus Page Gas: Initial open flow MCF/d Oil: Initial open flow MCF/d Final open flow MCF/d Final open flow MCF/d Final open flow military for final open flow psig (surface pressure)	y zone depth (ft)  I flow E  ow B  Hour	7,310-12,585 Bbl/d bl/d s	lata on separate s	heet)	
Second producing formation Pay 2	zone denth (ft)				
Gas: Initial open flowMCF/d Oil: Initial open		 Bbl/d			
Final open flow MCF/d Final open flow		bl/d			
Time of open flow between initial and final tests					
Static rock Pressure psig (surface pressure)					

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlene Milliams Signature

4-2-2012 Date

Were core samples taken? Yes	No_X	Were cut	tings caught during	g drilling? Yes X No
Were Electrical, Mechanical or Geoph	ysical logs recorded	-	es, please list n/a	
NOTE: IN THE AREA BELOVER FRACTURING OR STIMULATING DETAILED GEOLOGICAL RECOUNTERED BY THE	NG, PHYSICAL CH CORD OF THE TO	LLOWING: 1). IANGE, ETC. 2). OPS AND BOT	DETAILS OF THE WELL LO TOMS OF ALL	G WHICH IS A SYSTEMATIC FORMATIONS, INCLUDING
Perforated Intervals, Fracturing, or Sti	mulating:			APR 0 8 2012
(See Attached)				MAC STATE AND A
		<del></del>		
Plug Back Details Including Plug Typ		ment PBTD 1		
Formations Encountered: Surface:	То	p Depth	1	Bottom Depth
(See Attached)				
				AP AND D
	11.14 - 34 h Annes	77 487/44/		

LITHOLOGY	TOP DEPTH (FT)	BOTTOM DEPTH (FT)
SLTSTN / SHALE	0	1250
BIG LIME	1250	1270
SLTSTN / SHALE	1270	1470
BIG INJUN	1470	1518
SHALE / SLTSTN	1518	1772
GORDON	1772	1800
SLTSTN / SHALE	1800	2152
SHALE / SLTSTN	2152	3822
BENSON	3822	3830
SLTSTN / SHALE	3830	6814
GENESEO	6814	6830
TULLY	6830	6915
HAMILTON	6915	7037
MARCELLUS	7037	12728

PROMESTICAL Consideration of APRIO 8 2012

#### PERFORATION RECORD ATTACHMENT

Well Name (Number):

Tali Trees 6H (831667)

PERFO	PERFORATION RECORD		<u> </u>	<del></del>		STIMULAT	ION RECOR	₹D		
	Interval P	erforated				Fi	luid	Propp	ing Agent	Average
Date	From	Ϋ́ο	Date	Interval	Treated	Туре	Amount	Туре	Amount	Injection
12/28/2010	12,263	12,585	12/28/2010	12,263	12,585	Slk Wtr	9,809	Sand	396,043	85.0
12/29/2010	11,863	12,185	12/29/2010	11,863	12,185	Slk Wtr	14,737	Sand	403,837	78.0
12/30/2010	11,463	11,785	12/30/2010	11,463	11,785	Slk Wtr	10,445	Sand	370,503	82.0
1/5/2011	11,063	11,397	1/1/2011	11,063	11,397	Slk Wtr	17,239	Sand	394,372	72.0
1/6/2011	10,663	10,985	1/6/2011	10,663	10,985	Slk Wtr	11,131	Sand	397,280	82.0
1/7/2011	10,263	10,585	1/7/2011	10,263	10,585	Slk Wtr	8,890	Sand	405,472	81.0
1/8/2011	9,943	10,185	1/8/2011	9,943	10,185	Slk Wtr	8,427	Sand	325,463	77.0
1/9/2011	9,303	9,625	1/9/2011	9,303	9,625	Slk Wtr	9,127	Sand	404,044	84.0
1/10/2011	8,903	9,225	1/10/2011	8,903	9,225	Slk Wtr	9,963	Sand	399,363	84.0
1/11/2011	8,503	8,825	1/11/2011	8,503	8,825	Sik Wtr	8,718	Sand	406,391	84.0
1/12/2011	8,103	8,425	1/12/2011	8,103	8,425	Slk Wtr	8,622	Sand	402,316	83.0
1/12/2011	7,703	8,025	1/12/2011	7,703	8,025	Sik Wtr	8,640	Sand	404,732	83.0
1/13/2011	7,310	7,622	1/13/2011	7,310	7,622	Slk Wtr	8,746	Sand	439,453	83.0
										İ
									<u> </u>	
		4							1	
			<u> </u>							

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Rev	(9-1	1)

## State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	1-18-2012
API#:	47-097-03708

m name: Tall Trees	Operator We	ll No. <u>.</u> 8H (83167	9)	
CATION: Elevation: 1,664'	_ Quadrangle:	Rock Cave		
District: Banks	County: Upsh	nur ·		
Latitude: 4,196' Feet South of 38 Deg.  Longitude 4,940 Feet West of 80 Deg.	47 Mir	1. 30 Sec		
Longitude 4,940 Feet West of 80 Deg.  Company: Chesapeake Appalachia, L.L.C.	. <u>20 Mir</u>	1. 00 Sec		
Address: P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Oklahoma City, OK 73154-0496	20"	20'	20'	driven
Agent: Eric Gillespie	13 3/8"	470'	470'	480 cf
Inspector: David Jackson	9 5/8"	2162'	2162'	962 cf
Date Permit Issued: 10/27/2010	5 1/2"	11888'	11887'	1796 cf
Date Well Work Commenced: 7/18/2010				
Date Well Work Completed: 1/13/2011				
Verbal Plugging:				
Date Permission granted on:				
Rotary 🗸 Cable Rig			.,	
Total Vertical Depth (ft): 6,932'				
Total Measured Depth (ft): 11,887'				
Fresh Water Depth (ft.): 350'				
Salt Water Depth (ft.): None				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): None				
Void(s) encountered (N/Y) Depth(s) N				
Producing formation Marcellus Pay 2  Gas: Initial open flow 2,713 MCF/d Oil: Initial open flow MCF/d Final open flow Time of open flow between initial and final tests	zone depth (ft) ⁷ low <u> </u>	r,179'-11,741' bl/d rl/d	PRIST.	eng filozofi Maria
Static rock Pressure 3,119 psig (surface pressure) af	ter Hou	rs	Arno	

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marley Williams
Signature

Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

4-2-2012 Date

Were core samples taken? YesNo_X	Were cutting:	s caught during drilling? Yes X No	0
Were Electrical, Mechanical or Geophysical log	s recorded on this well? If yes, pl	ease list GR, neutron, density, res	sistivity
NOTE: IN THE AREA BELOW PUT FRACTURING OR STIMULATING, PHYS DETAILED GEOLOGICAL RECORD O COAL ENCOUNTERED BY THE WELLB	SICAL CHANGE, ETC. 2). TH F THE TOPS AND BOTTON	E WELL LOG WHICH IS A SYSTE IS OF ALL FORMATIONS, INCL TAL DEPTH.	ነ እ.ፈ ል ጥፕ /
Perforated Intervals, Fracturing, or Stimulating:			
(See Attached)			¹ ্ট্ _র 2
			All Sections
Plug Back Details Including Plug Type and Dep	th(s): Cement @ 11,786'		
Formations Encountered: Surface:	Top Depth	Bottom Depth	
(See Attached)			<del></del>
			· · · · · · · · · · · · · · · · · · ·

LITHOLOGY	TOP DEPTH (FT)	BOTTOM DEPTH (FT)
SLTSTN / SHALE	0	1250
BIG LIME	1250	1270
SLTSTN / SHALE	1270	1470
BIG INJUN	1470	1518
SHALE / SLTSTN	1518	1772
GORDON	1772	1800
SLTSTN / SHALE	1800	2152
SHALE / SLTSTN	2152	3822
BENSON	3822	3830
SLTSTN / SHALE	3830	6704
GENESEO	6704	6757
TULLY	6757	6842
HAMILTON	6842	6891
MARCELLUS	6891	11887

APR C S 2012

#### PERFORATION RECORD ATTACHMENT

Well Name (Number):

Tall Trees 8H (831679)

PERFOR	RATION REC	CORD		<del></del>		STIMULAT	ION RECOR	RD		
	Interval P	erforated				Fluid		Propping Agent		Average
Date	From	To	Date	Interval	Treated	Туре	Amount	Туре	Amount	Injection
12/28/2010	11,419	11,741	12/28/2010	11,419	11,741	Slk Wtr	10,933	Sand	398,949	80.0
12/29/2010	11,019	11,341	12/29/2010	11,019	11,341	Slk Wtr	8,350	Sand	347,146	88.0
12/30/2010	10,619	10,941	12/30/2010	10,619	10,941	Slk Wtr	9,582	Sand	396,645	85.0
1/3/2011	10,219	10,541	1/3/2011	10,219	10,541	Slk Wtr	9,281	Sand	432,187	85.0
1/4/2011	9,899	10,141	1/4/2011	9,899	10,141	Slk Wtr	7,685	Sand	335,050	86.0
1/5/2011	9,579	9,821	1/5/2011	9,579	9,821	Slk Wtr	7,593	Sand	321,833	86.0
1/6/2011	9,179	9,501	1/6/2011	9,179	9,501	Slk Wtr	9,620	Sand	414,018	86.0
1/7/2011	8,779	9,101	1/7/2011	8,779	9,101	Slk Wtr	8,905	Sand	405,261	83.0
1/8/2011	8,379	8,701	1/8/2011	8,379	8,701	Slk Wtr	10,240	Sand	405,053	84.0
1/9/2011	7,979	8,301	1/9/2011	7,979	8,301	Slk Wtr	10,449	Sand	398,815	83.0
1/10/2011	7,579	7,901	1/10/2011	7,579	7,901	Slk Wtr	8,790	Sand	408,189	84.0
1/11/2011	7,179	7,501	1/11/2011	7,179	7,501	Slk Wtr	8,558	Sand	397,374	84.0
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WR-35 Rev (9-11)

that the information is true, accurate, and complete.

# State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	1-24-2012	
API#:	47-097-03710	

CATION: Elevation: 1,950'	One de 1	Pock Covo	···			
CATION: Elevation: 1,000	_ Quadrangle: .	Quadrangle: Rock Cave				
District: Banks	County: Upsh					
Latitude: 8,495' Feet South of 38 Deg. Longitude 9,250' Feet West of 80 Deg.				5 d x		
Longitude 9,250' Feet West of 80 Deg.	Mir.	ı. <u>00</u> Se	c.	MAR Nama		
Company: Chesapeake Appalachia, L.L.C.			Š.a. Gaza	The Say Inc.		
Address: P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill) up Cu. Ft.		
Oklahoma City, OK 73154-0496	20"	40'	40	Driven		
Agent: Eric Gillespie	13 3/8"	580'	580'	614 cf		
Inspector: Bill Hatfield	9 5/8"	2407'	2407'	1059 cf		
Date Permit Issued: 1/27/2010	5 1/2"	13293'	13293'	2761 cf		
Date Well Work Commenced: 11/4/2010						
Date Well Work Completed: 5/10/2011						
Verbal Plugging:						
Date Permission granted on:						
Rotary Cable Rig						
Total Vertical Depth (ft): 7,152'						
Total Measured Depth (ft): 13,294'						
Fresh Water Depth (ft.): 475'						
Salt Water Depth (ft.): None						
Is coal being mined in area (N/Y)? N						
Coal Depths (ft.): n/a						
Void(s) encountered (N/Y) Depth(s) Y 144'						
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OPEN FLOW DATA (If more than two producing formation Producing formation Marcellus Pay 2	ons piease inclu zone depth (ft)?	de additional d 7,622'-13151'	ata on separate s	heet)		
Gas: Initial open flow 2,662 MCF/d Oil: Initial open fl						
Final open flow MCF/d Final open flow						
Time of open flow between initial and final tests						
Static rock Pressure 3,218 psig (surface pressure) af	terHou	rs				
Second producing formation Pay zor	ne denth (ff)					
Gas: Initial open flow MCF/d Oil: Initial open fl		bl/d				
Final open flow MCF/d Final open flow						
Time of open flow between initial and final tests			•			
Static rock Pressurepsig (surface pressure) aft						

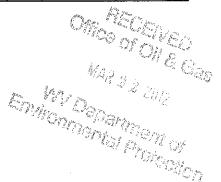
Vere core samples taken? YesNo_X	Were cuttings caug	tht during drilling? Yes X No
Vere Electrical, Mechanical or Geophysical lo	ogs recorded on this well? If yes, please	_{list} none
NOTE: IN THE AREA BELOW PUT FRACTURING OR STIMULATING, PH DETAILED GEOLOGICAL RECORD COAL ENCOUNTERED BY THE WELL	YSICAL CHANGE, ETC. 2). THE WI OF THE TOPS AND BOTTOMS O	ELL LOG WHICH IS A SYSTEMATIC OF ALL FORMATIONS, INCLUDING DEPTH.
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Plug Back Details Including Plug Type and D	epth(s): BP@ 13,152'	
Formations Encountered: Surface:	Top Depth /	Bottom Depth
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FORMATION/LITHOLOGY	TOP DEPTH (ft)	BOTTOM DEPTH (ft)	
SS and Shale	0	1425	
Big Lime	1425	1646	7
Big Injun	1646	1850	7
SS and Sltst w/ minor Shale	1850	2450	7
Sltst w/ minor Shale	2450	3998	
Benson	3998	4400	7
Sltst and SS w/ minor Shale	4400	4950	
Sltst and Shale w/ minor SS	4950	6650	
Sltst and Shale	6650	6795	1 .
Geneseo	6795	7140	
Tully	7140	7163	
Hamilton	7163	7315	Man Place
Marcellus	7315	13293	

#### PERFORATION RECORD ATTACHMENT

Well Name and Number: James Ogden 5H (831781)

	PERFORATION RECORD		j			STIMULAT	ION REC	ORD		
	Interval	Perforated				Flu	id	Prop	ping Agent	Average
Date	From	То	Date	Interva	Treated	Туре	Amount	Туре	Amount	Injection
3/1/2011	12,829	13,151	3/1/2011	12,829	13,151	Sik Wtr	9,327	Sand	430,760	85
3/12/2011	12,429	12,751	3/12/2011	12,429	12,751	Sik Wtr	11,367	Sand	416,240	84
3/13/2011	12,029	12,351	3/13/2011		12,351	Slk Wtr	10,365	Sand	482,440	84
3/13/2011	11,629	11,951	3/13/2011	11,629	11,951	Slk Wtr	9,684	Sand	404,620	85
3/14/2011	11,229	11,551	3/14/2011	11,229	11,551	Slk Wtr	9,770	Sand	451,880	82
3/14/2011	10,829	11,144	3/14/2011		11,144	Slk Wtr	10,393	Sand	482,060	85
3/15/2011	10,429	10,751	3/15/2011		10,751	Slk Wtr	10,371	Sand	481,660	83
3/15/2011	10,029	10,351	3/15/2011		10,351	Slk Wtr	10,085	Sand	481,900	85
3/16/2011	9,632	9,951	3/16/2011	9,632	9,951	Slk Wtr	18,200	Sand	411,700	83
3/16/2011	9,229	9,551	3/16/2011		9,551	Slk Wtr	10,308		427,830	85
3/17/2011	8,836	9,151	3/17/2011	8,836	9,151	Slk Wtr	13,902	Sand	481,800	75
3/17/2011	8,436	8,751	3/17/2011		8,751	Slk Wtr	9,991	Sand	481,120	85
3/18/2011	8,029	8,351	3/18/2011	8,029	8,351	Slk Wtr	10,278	Sand	479,420	85
3/19/2011	7,622	7,951	3/19/2011	7,622	7,951	Slk Wtr	14,701	Sand	447,500	78
			1							





# Survey Report

Company: Chesapeake Appalachia LLC

Well: James Ogden 5H

State: WV

API or UWI:

County: Upsur

Comment

Location: French Creek

Rig: Nomac 37

Job Number: SEM -10625 Operator: Sharewell MWD Service LP

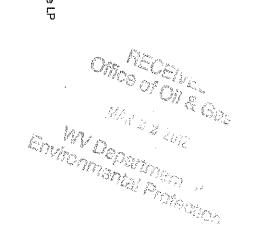
Magnetic Declination: 0.00

Proposed Azimuth: 341.96 North Reference: GRID

Tiein Survey Data:

7556.00	MD
88.90	inclination
342.90	Azimuth
7152.35	וסעד
1168.29	NS
954.04	EΨ

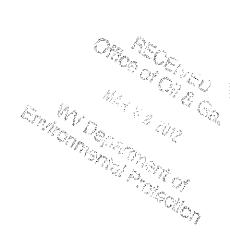
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MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	٧S	DLS
7615.00	90.40	343.20	7152.71	1224.72	936.84	37.41	1541.95	874.40	2.59
7678.00	90.60	343.10	7152.16	1285.02	918.58	35.56	1579.57	937.38	0.35
7740.00	91.20	343.30	7151.19	1344.36	900.66	33.82	1618.18	999.36	1.02
7803.00	89.70	343.30	7150.69	1404.70	882.56	32.14	1658.95	1062.34	2.38
7867.00	89.80	343.40	7150.97	1466.02	864.22	30.52	1701.79	1126.32	0.22
7929.00	90.20	343.40	7150.97	1525.43	846.51	29.03	1744.57	1188.30	0.65
7993.00		343.60	7150.64	1586.80	828.33	27.57	1789.99	1252.27	0.44
8056.00		343.30	7150.03	1647.19	810.39	26.20	1835.74	1315.25	
8120.00	91.00	343.20	7149.08	1708.46	791.94	24.87	1883.09	1379.23	0.49
8183.00		341.30	7148.48	1768.46	772.74	23.60	1929.91	1442.22	3.34
8246.00	The State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of State of	341.30	7148.26	1828.13	752.54	22.37	1976.96	1505.21	0.32
8306.00	90.50	341.10	7147.84	1884.93	733.21	21.26	2022.51	1565.21	0.47
8369.00	90.60	341.00	7147.23	1944.51	712.75	20.13	2071.02	1628.20	0.22
8432.00	90.80	341.00	7146.46	2004.07	692.24	19.06	2120.26	1691.18	0.32
8495.00	90.00	341.80	7146.02	2063.78	672.15	18.04	2170.48	1754.18	1.80



10837.00	10773.00	10710.00	10646.00	10583.00	10520.00	10457.00	10393.00	10330.00	10267.00	10204.00	10137.00	10075.00	10013.00	9949.00	9886.00	9822.00	9759.00	9697.00	9633.00	9569.00	9505.00	9443.00	9380.00	9317.00	9255.00	9191.00	9128.00	9065.00	9001.00	8938.00	8874.00	8811.00	8748.00	8684.00	8621.00	8557.00
88.50	88.00	87.80	87.70	87.60	87.50	87.70	87.80	88.60	88.20	87.80	88.90	89.40	89.20	89.30	89.50	89.60	90.80	90.40	90.10	89.00	89.00	89.10	89.10	88.80	89.00	89.10	89.10	88.50	88.40	88.60	88.80	88.80	88.80	88.80	88.70	88.80
342.60	341.40	341.40	341.80	342.20	342.20	341.90	342.20	342.80	343.10	343.10	342.90	343.80	343.50	343.60	342.50	343.30	342.50	342.30	341.30	340.90	341.10	341.70	342.10	341.50	341.80	341.80	341.90	342.10	342.40	342.40	342.00	342.20	342.10	342.50	343.10	342.80
7195.21	7193.25	7190.94	7188.43	7185.85	7183.15	7180.52	7178.00	7176.02	7174.26	7172.07	7170.14	7169.22	7168.46	7167.62	7166.96	7166.46	7166.68	7167.33	7167.61	7167.10	7165.99	7164.96	7163.97	7162.82	7161.63	7160.56	7159.57	7158.26	7156.52	7154.88	7153.42	7152.10	7150.78	7149.44	7148.07	7146.67
4293.86	4233.02	4173.35	4112.67	4052.80	3992.87	3932.99	3872.15	3812.10	3751.89	3691.65	3627.60	3568.21	3508.72	3447.35	3387.09	3325.92	3265.71	3206.61	3145.82	3085.27	3024.77	2966.01	2906.14	2846.30	2787.46	2726.67	2666.82	2606.91	2545.98	2485.95	2425.03	2365.09	2305.14	2244.18	2184.01	2122.84
-40.38	-20.61	-0.53	19.66	39.11	58.35	77.75	97.46	116.39	134.86	153.16	172.74	190.50	207.95	226.08	244.44	263.26	281.78	300.53	320.52	341.25	362.08	381.85	401.42	421.10	440.61	460.60	480.22	499.69	519.19	538.23	557.79	577.15	596.46	615.91	634.54	653.30
359.46	359.72	359.99	0.27	0.55	0.84	1.13	1.44	1.75	2.06	2.38	2.73	3.06	3.39	3.75	4.13	4.53	4.93	5.35	5.82	6.31	6.83	7.34	7.86	8.42	8.98	9.59	10.21	10.85	11.53	12.22	12.95	13.71	14.51	15.35	16.20	17.11
4294.01	4233.27	4168.38	4112.71	4052.99	3993.30	3933.76	3873.38	3813.88	3754.31	3694.82	3631.71	3573.29	3514.88	3454.75	3395.90	3336.32	3277.84	3220.67	3162.10	3104.08	3046.36	2990.49	2933.73	2877.28	2822.07	2765.30	2709.71	2654.37	2598.38	2543.55	2488.35	2434.50	2381.06	2327.17	2274.33	2221.09
4095.25	4031.50	3963.63	3904.40	3841.46	3778.51	3715.57	3651.62	3588.65	3525.69	3462.74	3395.78	3333.81	3271.84	3207.87	3144.88	3080.89	3017.90	2955.91	2891.91	2827.92	2763.94	2701.95	2638.96	2575.97	2513.98	2449.99	2387.00	2324.02	2260.04	2197.06	2133.08	2070.09	2007.11	1943.12	1880.15	1816.17
2.03	0.32	0.64	0.65	0.16	0.57	0.49	1.59	0.79	0.63	1.67	1.66	0.58	0.22	1.77	1.26	2.29	0.72	1.63	1.83	0.31	0.98	0.63	1.06	0.58	0.16	0.16	1.00	0.49	0.32	0.70	0.32	0.16	0.62	0.97	0.49	2.52
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0.00	6364.36	6501.86	353.76	-706.22	6463.38	7233.04	342.70	89.10	13107.00
0.49	6300.36	6439.01	353.87	-687.41	6402.22	7232.14	343.10	89.30	13043.00
1.69	6236.40	6376.14	353.98	-668.96	6340.94	7231.31	343.40	89.20	12979.00
2.13	6173.40	6314.29	354.09	-650.60	6280.69	7229.99	342.70	88.40	12916.00
2.06	6110.45	6252.72	354.21	-631.25	6220.77	7227.90	341.50	87.80	12853.00
1.32	6047.48	6191.25	354.33	-611.53	6160.96	7226.14	342.00	89.00	12790.00
0.48	5986.48	6131.68	354.45	-592.63	6102.97	7225.50	341.90	89.80	12729.00
1.21	5924,49	6071.18	354.58	-573.37	6044.04	7225.12	341.90	89.50	12667.00
0.67	5861.47	6009.64	354.71	-554.16	5984.04	7224.41	342.60	89.20	12604.00
0.00	5798.51	5948.05	354.83	-535.48	5923.89	7223.36	342.90	88.90	12541.00
0.32	5735.51	5886.42	354.96	-516.96	5863.68	7222.15	342.90	88.90	12478.00
0.58	5672.54	5824.87	355.09	-498.33	5803.51	7220.94	342.70	88.90	12415.00
0.58	5610.55	5764.37	355.23	-479.75	5744.38	7219.64	342.40	88.70	12353.00
0.48	5548.57	5703.99	355.37	-460.85	5685.35	7218.13	342.10	88.50	12291.00
1.28	5486.58	5643.68	355.51	-441.80	5626.36	7216.67	342.10	88.80	12229.00
0.91	5423.58	5582.40	355.66	-422.49	5566,40	7215.79	342.20	89,60	12166.00
2.05	5359.59	5520.12	355.81	-403.19	5505.38	7215.18	342.70	89.30	12102.00
0.47	5295.64	5457.68	355.96	-384.86	5444.07	7214.50	344.00	89.50	12038.00
0.32	5231.67	5395.07	356.10	-367.22	5382.56	7213.78	344.00	89.20	11974.00
2.24	5168.73	5333.50	356.24	-349.85	5322.00	7212.79	344.00	89.00	11911.00
1.26	5105.76	5271.96	356.39	-332.38	5261.48	7212.46	343.80	90.40	11848.00
0.23	5041.80	5209.52	356.54	-314.58	5200.00	7212.46	343.90	89.60	11784.00
0.97	4978.84	5148.05	356.69	-297.16	5139.46	7211.96	344.00	89.50	11721.00
0.00	4915.90	5086.62	356.85	-279.85	5078.89	7211.08	344.10	88.90	11658.00
0.32	4852.93	5025.17	357.00	-262.60	5018.31	7209.88	344.10	88.90	11595.00
0.81	4789.99	4963.80	357.17	-245.34	4957.74	7208.56	344.10	88.70	11532.00
0.80	4727.06	4902.46	357.33	-228.14	4897.16	7206.85	344.20	88.20	11469.00
2.27	4663.15	4840.27	357.51	-210.46	4835.68	7204.79	343.70	88.10	11405.00
1.02	4600.19	4779.34	357.70	-192.05	4775.46	7202.86	342,30	88.40	11342.00
1.66	4537.22	4718.60	357.90	-173.11	4715.40	7201.38	342.70	88.90	11279.00
0.36	4473.19	4656.96	358.11	-153.65	4654.43	7200.54	341.90	89.60	11215.00
0.81	4411.19	4597.42	358.32	-134.49	4595.47	7200.05	342.10	89.50	11153.00
0.78	4348.21	4536.90	358.54	-115.39	4535.44	7199.56	342.60	89.60	11090.00
0.57	4284.25	4475.39	358.77	-96.41	4474.32	7198.89	342.90	89.20	11026.00
0.16	4221.22	4414.81	358.99	-77.79	4414.15	7197.84	342.70	88.90	10963.00
0.71	4158.21	4354.35	359.22	-59.11	4353.99	7196.63	342.80	88.90	10900.00
							WOMEN CO.		Name and Address of the last



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0 00 PT	6550 34	6684.08	353,44	-763.49	6640.32	7235.82	341.60	89.20	13293.00
11.00						A STATE OF THE PERSON NAMED IN COLUMN			1
283	6501.34	6636.13	353.53	748.03	6593,83	/235.13	341.60	07.89	13244,00
		THE PERSON NAMED IN COLUMN NAM					211.22	95.00	200
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21 August 2012

API# 47-10100104

## State of West Virginia Division of Environmental Protection Section of Oil and Gas Well Operator's Report of Well Work

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Cement

Fill Up

Cu. Ft.

305 sks

240 sks

265 sks

Farm name:

Pardee

Operator Well No.: SE

LOCATION:

Elevation: 1577'

Quadrangle: Hacker Valley

AUG 28 2012

District:Holly

County: Webster

Casing

&

**Tubing** 

9-5/8"

4-1/2"

Used

in

Well

696

2367'

6739'

Left

in

Well

696'

2367

6739'

W Je atter y

Latitude: 80° 29' 20.3 "

Longitude: 38° 39' 39.7 "

Company:

EASTERN AMERICAN ENERGY CORPORATION

501 56th Street

. Jo Bucci - 1---- www.acaan

Charleston, WV 25328

Agent: Rod Winters

Inspector: Craig Duckworth

Permit Issued: 01/11/2007

Well work commenced: 07/13/2007
Well work completed: 10/11/2007

Verbal plugging

Permission granted on:

Rotary X Cable Rig

Total Depth (feet): 6777'

Fresh water depths (ft): 140', 295'

Salt-water depths (ft): 1124'

Is coal being mined in area? (Y/N) No

Coal Depths (ft): N/A

Open Flow Data

Gas: Initial open flow	N/A	MCF/d	Oil:	Initial open flow	0	Bbl/d
Final open flow		MCF/d		Final open flow	0	Bbl/d
Time of open flow be	tween initia	al and fin	al tests		Day	
Static rock pressure	N/A	psi	(surface	pressure) after	Ho	ours
1st Producing Formation	M	larcellus		Pay zone depth (ft)	6450'-	6500'
2 nd Producing Formation				Pay zone depth (ft)		
3 rd Producing Formation				Pay zone depth (ft)		
4 th Producing Formation				Pay zone depth (ft)		

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Rod Winters , Agent
For: EASTERN AMERICAN ENERGY CORPORATION

By: Designated Agent Date: 21 August 2012

ECA/Pardee 3 WR35

STAGE ONE:

Marcellus

Shots 6450' - 6500'

60Q Foam Frac

71482 lbs sand.

 $1.778~\mathrm{MMcf}$ 

N2



FORMATION COLOR, HARD OR SOFT	TOP FEET	BOTTOM FEET
K.B.	0	10
Fill	10	20
Sand	20	50
Sandy Shale	50	63
Sand	63	172
Sandy Shale	172	444
Salt Sand	444	641
Salt Sand	641	756
Coal	756	760
Salt Sand	760	800
Sandy Shale	800	815
Shale "R.R."	815	955
Sandy Shale	955	1021
Sand	1021	1037
Sandy Shale	1037	1170
Shale	1170	1250
Little Lime	1250	1290
Blue Monday	1290	1340
Big Lime	1340	1570
Sandy Shale	1570	1655
Shale	1655	1765
Gantz	1765	1825
Shale	1825	1840
Gordon	1840	1870
Shale	1870	2029
Fifth Sand	2029	2083
Sandy Shale	2083	3523
Shale	3523	3647
Sandy Shale	3647	3930
Benson	3930	3955
Shale	3955	4160
Sandy Shale	4160	4327
Alexander	4327	4360
Sandy Shale	4360	4985
Shale	4985	6556
Marcellus	6556	6617
Onondaga	6617	6620
Huntersville	6620	6777

REMARKS
Including indication of all fresh & salt
water, coal, oil & gas
Hole damp @ 140'
2" H2O @ 295'
Damp @ 1124'

Damp @ 1124
Gas Checks:
1000'- N/S
1325'- N/S
2100'- N/S
4020'- N/S
4979'- N/S
5578'- N/S
5795'- N/S
6009'- N/S
6630'- N/S
Collars'- N/S

FECEIVED
Office of Oil & Gas

AUG 23 2012

VVV Department of
Environmental Protection

Date API#

July 8, 2008 47 - 103 - 02292

## State of West Virginia Division of Environmental Protection Section of Oil and Gas Well Operator's Report of Well Work

Farm Name:	Coasta	l Timberlan	ds Co	Operat	or Well	No.:	Cox 5	10845		····
LOCATION:	Elevation: District: Latitude: Longitude:	881 Gr: 11,100' 620'		Quadra County 39° 80°	-	35' 37'	Pine G Wetz MIN. MIN.		SEC. SEC.	
					sing & ng Size	Used in	n Drilling	Left I	n Weli	Cement Fill Up Cu. Ft.
Company:	Equitable Product 1710 Pennsylvan Charleston, WV 2	ia Avenue	ny							
				1	6"			4	4'	
Agent: Inspector: Permit Issued	:	David	Cowan 2007	11	3/4"			71	61'	400 sks
Well Work Co		April 22		.			0.20. 17.22	Article Control of the		
Well Work Co Verbal Pluggir	ng:	May 6	S			Ž.	FEEL Television		ali A Gi	. A. Oto.
Permission gra Rotary X		May 6	, 2008							
Total Depth (fe		19 [.]	10'				<del>- Saf</del>	() () ()	eritang Paritu	
Fresh Water D		19		•						
Salt Water De	• • • • • • • • • • • • • • • • • • • •	160				10. 0. 1.	M/10			- A
_	nined in area (Y /		N	<u> </u>		pre-	1 4 24 1 2 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1	g gaga laga gaga basasa		Matin (1)
•	ft) none reported			<del>.</del>		2,555,0 = 15				
OPEN FLOW	DATA				D 7 .					
Producing Fo	rmation				Pay Zo Depth					
Gas: Initial Op Final Op Time of op	pen Flow en Flow en flow between it	nitial and fin	MCF/d MCF/d al tests		Oil: In Fi	itial Ope nal Ope	n Flow Hours		***************************************	Bbi/d Bbi/d
Static rock pre	ssure	ps	sig surface pres	sure aft	er		Hours			
Second Produ	ucing Formation			<del></del>	Pay Zo Depth				·	
•			MCF/d MCF/d al tests sig surface pres		Fi	itial Ope nal Ope			· · · · · · · · · · · · · · · · · · ·	Bbl/d Bbl/d
STIMULATING,	CK OF THIS FORM PHYSICAL CHANG TIONS, INCLUDING	E, ETC. 2.)	THE WELL LOC	WHICH THE WE	I IS SYS	TEMATIC	C DETAILE	VALS, F ED GEO	RACTUF LOGICA	RING OR L RECORD
			By: Date:	Zu.	hua	Duz	<u>~</u>			

FORMATION	TOP	воттом	REMARKS
Sand & Shale	1	1910	

ENTAGRADADA FUNDAMON SEP 8 6 2012 CONSTRUCTOR FUNDAMON WR-35 Rev (9-11)

## State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	03/30/12	
API#:	47-103-02661	

Farm name: Rix, Earl H Revocable Living Trust					Operator Well No.: Green Dot Unit II 1H					
LOCATION: Elevation: 1,493'					Quadrangle: Littleton 7.5'					
District: Cl	ay				County	: Wetzel				1
Latitude:	9,325'	Feet South of	39	Deg.	42	Min.	30.0	Sec.		
Longitude_	1,685'	Feet West of	80	Deg.	32'	Min.	30.0	Sec.		

Grenadier Energy Partners, LLC Company: CT Corportion Casing & Used in Left in well Cement fill 707 Virginia Street East 15th Floor Address: drilling Charleston, WV 25301 Tubing up Cu. Ft. Dianna Stamper 24" 40' 40' Grouted In Agent: Inspector: Derek Haught 16" 417' 417' 452 cu.ft (CTS) 11-3/4" 1765 1765' 994 cu.ft (CTS) 08/08/2011 Date Permit Issued: 11/25/2011 8-5/8" 2788' 2788' 661 cu.ft Date Well Work Commenced: 01/30/2012 5-1/2" 12,619 12,619 2450 cu.ft (CTS) Date Well Work Completed: Verbal Plugging: Date Permission granted on: Rotary X Cable Rig Total Vertical Depth (ft): 7688' Total Measured Depth (ft): 12,652' Fresh Water Depth (ft.): Est. 270' N/A Salt Water Depth (ft.): Is coal being mined in area (N/Y)? N Coal Depths (ft.): N/A Void(s) encountered (N/Y) Depth(s) N

	us Shale Pay zone		12303 WID (7000 TVD)
Gas: Initial open flow 9,910	_MCF/d Oil: Initial open flow	Bbl/d	
Final open flow	_MCF/d Final open flow	Bbl/d	
Time of open flow between	en initial and final tests	Hours	
Static rock Pressure 4415	_psig (surface pressure) after	168 Hours	
		•	
Second producing formation	Pay zone d	lepth (ft)	·
	Pay zone d _MCF/d Oil: Initial open flow		
Gas: Initial open flow	-	Bbl/d	
Gas: Initial open flow Final open flow	MCF/d Oil: Initial open flow	Bbl/d Bbl/d	

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature

12/12 Date

Were core samples taken? Yes	NoX Were cuttings caugh	nt during drilling? Yes X No				
Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes - Gamma Ray						
DETAILED GEOLOGICAL RECO	PUT THE FOLLOWING: 1). DETAILS C, PHYSICAL CHANGE, ETC. 2). THE WE ORD OF THE TOPS AND BOTTOMS OF VELLBORE FROM SURFACE TO TOTAL I	LL LOG WHICH IS A SYSTEMATIC  ALL FORMATIONS INCLUDING				
Perforated Intervals, Fracturing, or Stim	ulating:					
Perforations: Total Perforated Interva	il (7755' - 12505' MD)	en de la companya de la companya de la companya de la companya de la companya de la companya de la companya de La companya de la co				
Fluid: 141,170 bbl Slickwater pumpe						
Sand: 2,849,925 lbs 100 mesh sand,	3,127,123 lbs 40/70 sand					
Plug Back Details Including Plug Type a	nd Depth(s): N/A					
Formations Encountered: Surface:	Top Depth /	Bottom Depth				
See Attached Sheet						

•

#### Green Dot Unit II 1H

Formation / ithology	Fun mo	т_
Formation/Lithology	From	To
Shale	16	49
Red Rock	49	89
Sand & Shale	89	99
Red Rock	99	175
Sand & Shale	175	237
Red Rock	237	254
Sand & Shale	254	374
Red Rock	374	389
Sand & Shale	389	1049
Shale	1049	1424
Lime	1424	1432
Red Rock	1432	1484
Sand	1484	2292
Lime	2292	2327
Big Lime	2327	2429
Injun	2429	2580
Sand & Shale	2580	3197
Gordon	3197	3234
Sand & Shale	3265	6774
Rhinestreet Shale	6774	7229
Sonya	7229	7405
Genesee Shale	7405	7478
Geneseo Shale	7478	7501
Tully Lime	7501	7505
Hamilton	7505	7588
Marcellus Shale	7588	N/A

#### State of West Virginia

		of Environmen	tal Protection		-, 711 and 33:
		ection of Oil ar erator's Report	= :	Ţ.	EP 0 4 2012
Farm Name : I		_	erator Well No	. T ###################################	
-	Elevation: 1458.66'	-	ngle: Oceana	Environ	<del>epartment of</del> <del>ental Protection</del>
500111014.	District: Clear Fork	Quaura		Wyoming	ento a serif of
	Latitude: 14,090 Feet South of	f37 Dag	٠.	w youning	- "Meetion
	Longitude: 7,140 Feet West				
	Longitude. 7,140 Feet West	or or Deg.	40 Min. <u>00</u>	Sec.	
Company; Cla	assic Oil and Gas Resources				<del> </del>
	West Brannon Road	Casina	Used in	Left	Cement
Nic	cholasville, KY 40356-8845	Casing &			Fill Up
A	DEST DESCRIPTION AND ST	Tubing	Drilling	In Well	Cu. Ft.
Agent: RO	BERT INGHRAM				
Inspector: Ba	rry Stollings	Size			
Permit Issued:	11-04-05				
Well Work Co	***	12 3/4"	25'	25'	n/a
Well Work Co.					
Verbal Pluggin					
Permission gra	•	9 5/8"	0,	0,	17/0
Rotary X		9 3/8	0	0	n/a
Total Depth (fe			<del>                                     </del>	<del></del>	_
Fresh water de					
· · · · · · · · · · · · · · · · · · ·		7"	1603'	1603'	230 sks
Salt water dept	hs (ft) None				
Is coal being m	ined in area (Y/N)? N	4 1/2"	5318'	5318'	262 sks
	119'-20', 1013'-15'				
Coal Depths (ft	t): 1122'-25', 1365'-67'				
OPEN FLOW					
Produ	cing formation L. Shale, M. Sh	ale, Big Lime	Pav zo	one depth (ft) Se	ee Back
	Initial open flow Show	······································	: Initial open fle	*	Bbl/d
	Final open flow 411	MCF/d	Final open		Bbl/d
	Time of open flow between initial		-		Hours
Static		psig (surfac		r 24	Uoure
Secon	d producing formation			depth (ft)	
Gas:	Initial open flow	MCF/d Oil	· Initial open f	low	BbI/d
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl.  Final open flow MCF/d Final open flow Bbl.					
	Time of open flow between inital		i mai open		Hours
		osig (surface pre	ecure) after		Hours
NOTE: ON BAC OR STIMULATI	K OF THIS FORM PUT THE FOLLO ING, PHYSICAL CHANGE, ETC. 2 RECORD OF ALL FORMATIONS, II	OWING: 1).DETA ). THE WELL L	AILS OF PERFO	SYSTEMATIC	ALS, FRACTURING DETAILED
	,	11		lys	
	I		DIL & GAS RESOI	URCES, INC.	
	•	BY:	Selliam 14	lly	
		Date:		_ /	

#### DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

12-16-05: 3 Stage frac with Schlumb: Shale 5042'-5190' (18 shots) - N2 frac - 355,600 Scf N2, BDP 2495#, ATP 2134#, AIR 49,000 Scf/min, ISIP 2325#. M.Shale 4727'-4916' (20 shots) - Variable Quality foam frac - 30,129# 20/40 sand, 99 bbl total fluid, 360,600 Scf N2, BDP 2388#, ATP 2306#, AIR 24 BPM, ISIP 2112#. Big Lime 2793'-2801' (17 shots) - 2750 gal 28% Hcl, energized with 56,100 Scf N2, BDP 2238#, ATP 850#, AIR 11 BPM, ISIP 600#. Flow back to pit on choke

FORMATION	TOP	BOTTOM	OIL, GAS, WATER
Pennsylvanian Sands, shales, coals	0,	1252	
Princeton	1756'	1780'	
Ravencliff	1869'	1914'	
Upper Maxton	2040'	2078'	
Middle Maxton	2310'	2348'	
Lower Maxton	2516'	2542'	
Big Lime	2760'	3066'	
Injun	<b>ara</b>	****	
Weir		<del>-</del>	
Berea	3633'	3674'	
Gordon	<del></del>	Market Space	
Devonian Shale	3674'	5342' TD	Gas at TD - Show

## State of West Virginia Division of Environmental Protection Section of Oil and Gas Well Operator's Papert of Well Work

API# 4710903032



L	-88	en Opera	ors Report	OI AAGII AA	Drk			~~ ^^
Farm Na	me Heartw	ood Forestia	nd		Well N	lumber 507	491	
Location	Elevation	1,347		Quadrangle	MALLO	RY		
	District	Clear For	ς.	County Degree	Wyomin Minut	<b>.</b>	ond	
	Latitude	9670	FSL	37.00		1	0.00	
	ongitude.	4480	FWL.	81.00	45.00		3:00	
Company			enue Charlesto	_	sing & bing Size	Used in Drilling	Left in Well	Cement Fill Up Cubic Ft
Agent	Cecil Ray	,		13	3/8	35	35	
Inspector Permit Issüed				9.5	5/8	678 2,526	678 2,526	324.30 552.10
We	ell Work Comn	nencec <u>11/(</u>	4/2008			L		
Verbal Plu	Vell Work Con I <b>gging</b> Permission gra		ell has	<u>. n</u> ot \ —	oten	comp	leted	
Rotary Rig	<u>χ</u> Ca	ble Rig						
Total Depth Water	5,204	J						
Type		From						
Fresh v	water	5" stream	n @ 4 <i>3o′</i>	i i	TELEGRAL	( Kemily)		
				Cho	0 . W 1		to a	
						South Acres		
				0	FP () (	[132]	e - e	
Coal & C	Pen Mines From		Processor States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States States	Property (				
	<b>Y</b> 5. 4:							
Open Flow Producing Formation					Pay Zone	Denth (fft): Se	e attached for d	lataile
rioddolig i omaal					, ay 20112	Dept. (11), Do		icums
Gas: Initial Oper	n Flow 0	М	CF <u>01/01/1900</u>	_Date (	Oil: Initial C	pen Flow	Bbl/d	
	pen Flow	M	)F	Date	Final Ope	en Flow		
	n flow betwee	n initial and fi	anl toets	0 hc	urs			
Static Rock P		0 a		hours	idis			
Second Producing	Formation			Pay 2	Zone Depth	(ft)	_	
Gas: Initial O	en Flow	M	OF	Date	Oil: Initial	Ones Eleur		Belid
			JF			•		BUITO
	n flow betwee				rinal Oj Urs	pen Flow -		
Static Rock Pres	sure	eft.	er	hours				
NOTE: On back of thi 1) Details of	is form put the Perforated int	ervals, fractur	ing or stimulating, ologfical record o	physical chang		pal encountere	d in the well bo	ore
ay rite treff i	-45 - al aranne	June 3				oduction Comp		·

By Mile Shuther
Date 1-95-9010

### EQT Company WR-35 Completion Report - Attachment Well Treatment Summary

Stiget	sir egineş V
Date	
FracTyp	
Zone	
# of Perfs	
From/To	-
BD Press	
ATP Psi	
Avg Rate	
Max Press Psi	
ISIP Psi	
10min SIP	5 min.
Frac Gradient	
Sand Proppant	
Water-bbl	1
SCF N2	Į
Acid-gaï	gal

Formation Name SALT SAND	Depth To 700.00	Depth Bottom 1,253	Formation Thick 553.00
RAVENCLIFF SAND	1,477.00	1,517	40.00
UPPER MAXTON SAN	1,700.00	1,765	65.00
MIDDLE MAXTON SA	2,155.00	2,263	108,00
LOWER MAXTON SA	2,377.00	2,410	33.00
LITTLE LIME	2.456.00	2,520	64.00
Greenbrier MKR 1	2.485.67	0	0.00
PENCIL CAVE SHALE	2,520.00	2,532	12.00
BIG LIME	2,532.00	2.886	354,00
UNION	2,616.30	0	0.00
PICKAWAY	2,694.22	0	0.00
TAGGARD SHALE	2,803.46	0	0.00
DENMAR	2,812.62	0	0.00
PS 30	3,006.38	0	0.00
WEIR SAND	3.007.00	3,118	111.00
PS 20	3.065.62	0	0.00
SUNBURY	3.453,00	3.472	19.00
BEREA SAND	3,472.00	3.516	44.00
UPPER DEVONIAN	3,515.42	0	0.00
GORDON SAND	3,810.02	3.824	13.98
estimal	t bor	ops	

 Depth 2,944
 Remarks trace

 3,168
 trace

 3,579
 trace

 4,010
 trace